# Endowments DA

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#### Uniqueness -- state funding for public colleges is decreasing in the squo, causing increased reliance on endowments from private donors.

**Press:** Press, Alex [The Nation] “Silence on Campus: Contingent Work and Free Speech.” *The Nation.* February 2016. RP

**Explaining the role financial needs play in decisions to censor faculty in public higher education, Robinson argues, “As public funding is cut, the administration becomes more reliant on private donors. These donors then use that leverage, threatening to withdraw donations if an administration doesn’t act.” The problem is worsening as public funds for higher education are drying up across the country, according to a recent report by the Center on Budget and Policy Priorities. As this money dwindles, administrations turn to wealthy donors, creating the conditions under which prestigious donors can sway administrator’s decisions** on how to respond to controversial faculty, if those faculty can get hired in the first place.

#### Link -- the aff lets in all speech, causing donors to withdraw funds.

**Macdonald:**G. Jeffrey MacDonald Correspondent of The Christian Science Monitor. Donors: too much say on campus speech? ; Colleges feel more pressure from givers who want to help determine who'll be speaking on campus. The Christian Science Monitor [Boston, Mass] 10 Feb 2005: 11.

According to Hamilton President Joan Hinde Stewart, **angry benefactors threatened to quit giving if the Clinton, N.Y., college were to give a podium to the University of Colorado professor who had likened World Trade Center workers to Nazis in a 2001 essay**. In doing so, they employed an increasingly popular tactic used at colleges in Utah, Nevada and Virginia with mixed degrees of success last fall in attempts to derail scheduled appearances by "Fahrenheit 9-11" filmmaker Michael Moore. **Although demanding givers are nothing new, observers of higher education see in recent events signs of mounting clout for private interests to determine which ideas get a prominent platform on campus and which ones don't**. Faced with such pressures, administrators say they're trying to resist manipulation. Mr. Hamilton canceled Mr. Churchill's speech, Stewart said, only after a series of death threats pushed the situation "beyond our capacity to ensure the safety of our students and visitors." **Yet in an age when financiers increasingly want to set the terms for how their gifts are to be used, those responsible for the presentation of ideas and speakers seem to be approaching them much like other commodities on campus. "People are wanting their values portrayed and wanting institutions to do exactly what they want them to do,"** said Dr. Wes Willmer, vice president of university advancement at Biola University in La Miranda, Calif., and a frequent writer on the topic of university fundraising. "They're not giving for the common good. They're giving because they want to accomplish something, and that plays out in the speaker realm as well." Pressure to reshape the landscape of ideas is coming from various corners. **At the University of Nevada, Reno, seven-figure donor Rick Reviglio threatened this fall to stop giving altogether unless the university, which had invited Mr. Moore, would instead arrange for the filmmaker to debate a prominent conservative**. The university declined his $100,000 offer to stage the event. In California and Virginia, state lawmakers helped persuade presidents at California State University San Marcos and George Mason University, respectively, that upwards of $30,000 for Moore's appearance would constitute **an** "inappropriate" use of state funds on the eve of an **election**. The San Marcos campus hosted the **event** anyway, however, after a student group raised its own money to sponsor it. In the case of Mr. Churchill, the controversy rages on. Since Hamilton's decision, administrators have nixed Mr. Churchill's scheduled appearances at Wheaton College (Mass.), Eastern Washington University and even his own institution, the University of Colorado at Boulder. Security concerns were officially to blame in each case, although activists who opposed Churchill's message have offered another explanation. "**Everything comes back down to money, and they were worried about funding at Hamilton College**," says Bill Doyle, outreach director for the World Trade Center United Families Group. He said survivors who lost loved ones in the 9/11 attacks had lobbied Hamilton's four largest corporate donors to withhold future gifts if Churchill were allowed to speak. "**You have all these rich corporations throughout the world and the country. Perhaps they'll take a look at what they're funding," says Doyle, especially in terms of paid speakers who "promote hate."**

## Add Ons

### Link – Protests

#### Protests and speech on campus kills donations – University of Missouri proves.

**Keller:** Keller, Rudi [Contributor, Columbia Daily Tribune] “University of Missouri fundraising takes $6 million hit in December as donors hold back funds.” *Columbia Daily Tribune.* February 2016. RP

**New pledges and donations to the University of Missouri fell $6 million in December as the campus weathered the fallout of public discontent that also threatens to erode the school’s finances via state support and tuition revenue**. December combines Christmas generosity and the promise of tax deductions on returns due April 15, making it a prime time for fundraisers at major institutions. In December 2014, new pledges and donations for all campus activities including athletics totaled $19.6 million, according to figures compiled by the university’s advancement office. Only $13.6 million came in this December, a drop of about 31 percent. The figures represent new commitments and donations that are not given in fulfillment of previous pledges, Vice Chancellor of University Advancement Tom Hiles said. For the three complete months since campus protests made international news in November, new pledges and donations to MU declined by about $7.4 million. Along with the decrease in new support, pledges totaling about $2 million were withdrawn, Hiles said. About 10 were gifts of $25,000 or more, including one for $500,000, he said. Total new pledges and donations in fiscal year 2015 totaled $147.6 million, down from a record $164.1 million in fiscal year 2014. The advancement office has fielded more than 2,000 calls from people upset with the university and tracks them by topic on a heat map. “It ran the gamut from” Assistant Professor Melissa “Click to Planned Parenthood to just a general lack of leadership,” Hiles said. “‘**Who’s in charge? Are the students running it?’ If I heard inmates are running the asylum one more time I was going to** ... . Those were the general categories.” **Student demonstrations over racism and marginalization on campus made international headlines** after the Tiger football team announced it would boycott athletic activities in support of a hunger strike by Concerned Student 1950 member Jonathan Butler. Athletic donations also have dipped, including a 68 percent drop in December cash gifts compared to December 2014 and a 38 percent decline in new pledges and donations as tallied in Hiles’ office during November, December and January. The Athletic Department’s decreased fundraising over that period — $1.3 million — is included in the total campus decline of $7.4 million. Giving by smaller donors, defined as those who give less than $10,000, declined by about 5 percent in the three-month period, with drops in November and December somewhat offset by a January increase in giving. Small donors gave or pledged $4.76 million in the period, down from $5.02 million the previous year. “We definitely got hit in our annual fund and other points,” Hiles said. “It was rough because normally December is our best month.” While his office fielded calls, Hiles said staff members researched callers who said they would never donate again. The result, he said, was “about a 90 percent correlation with people who ... have never given.” The final word on other financial issues is unresolved. A House committee already has denied the university a portion of the budget increase allocated to other state colleges and universities. Chairwoman Donna Lichtenegger, R-Jackson, cited Click’s continued employment and a demonstration that interrupted a UM System Board of Curators meeting for the cut. At a Wednesday hearing of the Joint Committee on Education, interim MU Chancellor Hank Foley said figures show an anticipated enrollment drop of 900 students, which roughly equates to a $20 million loss of tuition revenue. For the year to date overall, new pledges and donations are well ahead of the previous fiscal year because Rich and Nancy Kinder pledged $25 million in October to launch the Kinder Institute on Constitutional Democracy. Without that gift, the year-to-date total would have decreased by $8.7 million. “We are not actually off in terms of donations,” Foley told the joint committee. “In terms of overall donations, we are doing quite well.” Foley said he has “spent a fair amount of time speaking to donors.” The university launched its “Mizzou: Our Time to Lead” campaign Oct. 8 with a goal of raising $1.3 billion; several events were linked to Homecoming weekend at MU. **Protests by Concerned Student 1950 also started that weekend when several students blockaded the Homecoming parade and stopped then-UM System President Tim Wolfe’s car. It was another problem for an administration already beset by troubles, including faculty members and deans upset by former Chancellor R. Bowen Loftin’s administrative style**. Graduate assistants were rebelling over a loss of health insurance coverage, and the bad blood between Wolfe and Loftin was being played out in closed curators meetings. **Wolfe resigned on Nov. 9, and Click was caught on camera later that day trying to push a videographer away from the protest site and calling for “some muscle” to help**. Click has dominated headlines since Nov. 9, with 117 lawmakers signing letters calling for her dismissal and the curators putting her on paid suspension while her actions are investigated.

#### Protests on college campuses involving unrestricted speech kills funding and endowments.

**Hartocollis:** Hartocollis, Anemona [Contributor, The New York Times] “College Studetns Protest, Alumni’s Fondness Fades, and Checks Shrink.” *The New York Times.* August 2016. RP

Scott MacConnell cherishes the memory of his years at Amherst College, where he discovered his future métier as a theatrical designer. But protests on campus over cultural and racial sensitivities last year soured his feelings. Now Mr. MacConnell, who graduated in 1960, is expressing his discontent through his wallet. In June, he cut the college out of his will. “As an alumnus of the college, I feel that I have been lied to, patronized and basically dismissed as an old, white bigot who is insensitive to the needs and feelings of the current college community,” **Mr. MacConnell, 77, wrote in a letter to the college’s alumni fund in December, when he first warned that he was reducing his support to the college to a token $5. A backlash from alumni is an unexpected aftershock of the campus disruptions of the last academic year. Although fund-raisers are still gauging the extent of the effect on philanthropy, some colleges — particularly small, elite liberal arts institutions — have reported a decline in donations, accompanied by a laundry list of complaints. Alumni from a range of generations say they are baffled by today’s college culture.** Among their laments: Students are too wrapped up in racial and identity politics. They are allowed to take too many frivolous courses. They have repudiated the heroes and traditions of the past by judging them by today’s standards rather than in the context of their times. Fraternities are being unfairly maligned, and men are being demonized by sexual assault investigations. And university administrations have been too meek in addressing protesters whose messages have seemed to fly in the face of free speech. Scott C. Johnston, who graduated from Yale in 1982, said he was on campus last fall when activists tried to shut down a free speech conference, “because apparently they missed irony class that day.” **He recalled the Yale student who was videotaped screaming at a professor, Nicholas Christakis, that he had failed “to create a place of comfort and home” for students in his capacity as the head of a residential college. “I don’t think anything has damaged Yale’s brand quite like that,” said Mr. Johnston, a founder of an internet start-up and a former hedge fund manager. “T**his is not your daddy’s liberalism.” “The worst part,” he continued, “is that campus administrators are wilting before the activists like flowers.” Yale College’s alumni fund was flat between this year and last, according to Karen Peart, a university spokeswoman. Among about 35 small, selective liberal arts colleges belonging to the fund- raising organization Staff, or Sharing the Annual Fund Fundamentals, that recently reported their initial annual fund results for the 2016 fiscal year, 29 percent were behind 2015 in dollars, and 64 percent were behind in donors, according to a steering committee member, Scott Kleinheksel of Claremont McKenna College in California. His school, which was also the site of protests, had a decline in donor participation but a rise in giving. **At Amherst, the amount of money given by alumni dropped 6.5 percent for the fiscal year that ended** June 30, and participation in the alumni fund dropped 1.9 percentage points, to 50.6 percent, the lowest participation rate since 1975, when the college began admitting women, according to the college. The amount raised from big donors decreased significantly. Some of the decline was because of a falloff after two large reunion gifts last year, according to Pete Mackey, a spokesman for Amherst. **At Princeton, where protesters unsuccessfully demanded the removal of Woodrow Wilson’s name from university buildings and programs, undergraduate alumni donations dropped 6.6 percent from a record high the year before, and participation dropped 1.9 percentage points**, according to the university’s website. A Princeton spokesman, John Cramer, said there was no evidence the drop was connected to campus protests. Carolyn A. Martin, Amherst’s president, said she was not surprised that student protests had contributed to the decline in fund-raising. “I think colleges are places where complicated societywide issues are always thrashed out, sometimes across generations,” Dr. Martin, known as Biddy, said in an interview. Dr. Martin defended Amherst as a place where free speech and high standards still held sway, and said she had pushed back against protesters when necessary. Much of the alumni unrest at Amherst crystallized around the college’s decision to renounce its unofficial mascot, Lord Jeffery Amherst, known as Lord Jeff, an 18th-century British commander in the French and Indian War who gave his name to the town and, by extension, the college. A new generation of students has criticized his attitude toward Native Americans; he endorsed the idea of spreading smallpox among enemy tribes by giving them infected blankets. “He hated the Indians, because any general in his position would have,” said Gordon Hall III, class of ’52, a commercial real estate investor. He and Don MacNaughton, class of ’65, a retired lawyer and a history buff, wrote a booklet concluding that Lord Jeff had been unfairly maligned. Mr. MacNaughton paid for his share of its publication and promotion online with thousands of dollars he would have otherwise given to the college. “I feel that money is going to the benefit of Amherst College, in any event,” Mr. MacNaughton said. The older generation remembers Lord Amherst not as a genocidal warmonger, but as the inspiration for a beloved college fight song, written by a member of the class of 1906. The song, which Mr. Hall, 86, can still sing by heart, winks knowingly at Lord Amherst’s misdeeds with the line, “To the Frenchman and the Indians, he didn’t do a thing.” Mr. Hall, whose grandfather, father, uncles and son went to Amherst, archly calls himself “a powerhouse of nepotism.” But he has endowed a scholarship and says he welcomes students whose backgrounds are different from his. “I get letters every year about the recipient of my scholarship fund,” he said. “The name will always be a name that is ethnically or racially — you can tell — not like Hall. And so be it. You’ve got to go with the flow to some degree.” But, he wonders, “where did this supercorrectness thing come from?” In the category of supercorrectness, some alumni note that in March, a new director of the Women’s and Gender Center asked to be addressed as “they,” rather than “he” or “she.” “This is not a joke,” Paul Ruxin, who identified himself as “Old Curmudgeon class of ’65,” wrote to his classmates shortly before he died in April. David Pennock, class of ’60, one of four generations of his family to have gone to Amherst, is so invested in the college that he bridles at incorrect pronunciations of the name. “Our Amherst is pronounced without the H,” he said. His Amherst was tough but paternalistic, he said. When he fell behind in classes, the admissions dean, Eugene Wilson, class of ’29 and his father’s fraternity roommate, took him trout fishing on the Deerfield River and warned that he was headed for the “underachiever program,” a forced leave of absence. As class agent, Mr. Pennock did not reduce his giving, but he is one of a group of alumni pushing for the return of a core curriculum. Robert Longsworth, class of ’99, the seventh in his family to have attended Amherst, has been the president of the New York City alumni association and a class agent. But he has withdrawn, he said, because of his sense that the college has become “so wrapped up in this politically charged mission rather than staying in its lane and being an institution of higher education.” Mr. Longsworth, 39, who works in the financial industry, said he thought erasing history only made people more vulnerable to racism. “When the administration and faculty and ultimately a lot of the student body spends a great deal of time on witch hunts, I think that a lot of that intellectual rigor is forgone,” he said. Mr. Longsworth said he had heard from “friends who went to Hamilton, Trinity, Williams, Bates, Middlebury, Hobart, who are not pleased at what’s happened on campus, and they’ve kind of stepped away.” **For these alumni, he said, refusing to write a check “seems to be the only lever that can make a difference.”**

### Link – Speech Zones

#### Lawsuits against speech zones damage the college’s credibility and harms funding.

**Zeiner:** Zeiner, Carol L. [Assistant Professor of Law, St. Thomas University School of Law, Miami Gardens, Florida; former College Attorney for Miami-Dade Community College (now Miami-Dade College).] “Zoned Out! Examining Campus Speech Zones.” *Louisiana Law Review.* Volume 66. Fall 2005. RP

**Incidents involving campus speech zones' are frequently followed by a contentious battle involving the university, the students, and sometimes a free speech advocacy organization.** Civil activist groups, such as the FIRE, the ACLU, and the Rutherford Institute, often become involved. **Regardless of whether a lawsuit is filed, the confrontation is often followed by a media campaign initiated by those opposing the university's policy. The media campaign will likely disparage the university, accusing it of willfully disregarding the United States Constitution and the free speech rights of its own students. This strategic tactic is intended to focus negative attention on the university, with the goal of causing public embarrassment. The media campaign generally succeeds in achieving this goal. Such a campaign can have serious adverse effects on a public institution that depends on state appropriations, grants, and donations for its funding**.19 It can also negatively impact the reputation of the university and harm its ability to recruit students and faculty.2 0 **Clearly, use of campus speech zones by universities is a "hot topic," one which will likely continue to be the subject of controversy and litigation.**

### Mpx – Quality of Edu

#### Turns case – lack of financial backing kills quality of education. Webley 12

Kayla Webley, Kayla Webley is a Staff Writer at TIME., 1-25-2012, "Students Bear the Burden of State Higher Ed Cuts," TIME, <http://business.time.com/2012/01/25/students-bear-the-burden-of-state-higher-ed-cuts/> MG

Over the past year, state funding for higher education has declined by nearly 8%. In real terms, that amounts to $6 billion less being funneled into the nation’s public colleges and universities at a time when the demand for the degrees they provide is at an all-time high. According to the annual Grapevine report from the Center for the Study of Education Policy at Illinois State University, 41 states reduced funding as a result of the slow economic recovery and the end of federal stimulus funds. Of those, 29 states allocated less money in the 2011-12 school year than they did in the pre-recession 2006-07 school year. And further, 14 states reduced funds by more than 10%. In the most extreme case, New Hampshire reduced public funding for its colleges and universities by 41%; at the other end of the spectrum, North Carolina decreased funding by only 1%, and nine states managed to increase total state spending for higher ed. (MORE: Which Cities Spend the Most on Snack Foods?) As state money declines, universities are left with no choice but to put more of the financial burden on students — the same students who are already taking on more debt than ever recorded. “There’s an awful lot of substitution of student money for state money,” said Dennis Jones, president of the National Center for Higher Education Management Systems. “The first reaction is always to increase tuition.” At the same time, also as a result of the cuts, schools are curtailing need-based financial aid programs. “Students are being hit with a double whammy — higher cost and less help,” Jones added. But not only are students footing more of the bill, they are getting less bang for their buck. In order to compensate for the lack of funds, universities have made a host of significant changes — and almost none of them are good for students. To start, universities have been forced to scale back the number of enrollment slots they can offer in the first place and recruit more out-of-state (and thus higher-tuition paying) students to up their bottom lines. Here’s one way this scenario could play out: Since elite schools are the ones that most effectively recruit out-of-state students, we’ll start with Student A, a California resident, who is qualified to attend the University of California, Berkeley, but is shut out because out-of-state students have snapped up a larger portion of the enrollment slots than in years past. So, instead of Berkeley, Student A enrolls in a more mid-level state school, like UC Davis. As a result, Student B, who in the past would have been a shoo-in at Davis, is denied admission, and instead opts to attend a community college. Consequently, Student C, whose only option is community college, is shut out of higher education altogether. Those students who are lucky enough to get in often have a hard time finding space in the classes they need as universities slash classes and programs. “We’re seeing dramatic cases of students being enrolled in schools and then finding they can’t get into the courses they need to graduate,” said Paul Lingenfelter, president of the State Higher Education Executive Officers Association, the group that works with Grapevine to issue the report. “If you can’t provide seats in the classroom because you don’t have the money to hire faculty, that’s a denial of access for students.” (MORE: Students Bear the Burden of State Higher Ed Cuts) If they’re lucky enough to get into the classes they want, students are more likely to be taught by adjunct faculty instead of full-time professors. The potential negative for students in this scenario is that adjunct faculty, who may be good teachers, don’t shoulder the responsibility of advising and mentoring students. “It’s not unusual for adjuncts to come in, teach a class and be gone,” Jones said. “In California they call them freeway fliers because they may teach at several schools in order to make a living themselves.” According to Jones, the students most likely to have adjunct faculty are freshmen, meaning many students begin their college careers without seeing faculty who are permanent fixtures at the university. Of course, there are other ways to compensate for a lack of funds that don’t have a direct negative impact on students — including consolidating campuses, cutting programs with low-enrollment, scaling back administrative costs, being more energy efficient, etc. — but four years into the recession, most of the easy cuts have already been made, leaving raising tuition as the last option standing. But that’s not to say it’s a good option. “You have to worry most about the students who aren’t there that should be,” Lingenfelter said. “It’s very clear as cost has risen and aid has been stretched, that there are so many students who should be in higher education today that are not because they can’t afford to be.”

### Mpx – Tech Innovation

#### Endowments are key to tech innovation, scholarship, and US competitiveness.

**Leigh:** Leigh, Steven R. [Professor, College of Arts and Sciences] “Endowments and the future of higher education.” March 2014. RP

Prominent universities rely heavily on endowments to support their many academic missions. Yale University, often cited as an exemplar in terms of success in endowments, operates with an endowment of approximately $20 billion, which probably produces enough annual income to pay tuition for every enrolled student.  Income from Yale’s endowment funds a huge spectrum of academic pursuits, ranging from funding for women students in science, to professorships, to outreach programs for local teachers. **A significant endowment makes the university better, allowing the institution to recruit top faculty and students, while funding research and outreach more generally. Endowments help reduce the costs of education in many ways. Most importantly, endowments allow universities to support professors, graduate students and undergraduate students in undertaking visionary, high-risk, high-reward research**. Endowed professorships are reserved for only the most talented professors, and income from endowments helps the university support faculty, students and direct costs of research. Endowments also support student scholarships and programming.  In general, endowments help universities offset educational costs while placing the university on the cutting edge of scholarly discovery, research and creative work. There is a new urgency in seeking better endowment funding across the United States. In 2013, student loan debt for current students and graduates topped $1.08 trillion (<http://rt.com/usa/student-loan-debts-top-trillion-957/>). This number has been driven by declines in state funding for universities and resultant increases in tuition across the United States since 2002. CU-Boulder’s story is among the most stark:  Colorado decreased state funding from 2002 to 2012 by 48 percent, a larger percentage decline than any other state (<http://www.nsf.gov/news/news_summ.jsp?cntn_id=125542>).  Almost all public universities have raised tuition steadily in the last dozen years, and many premiere public institutions have reached the $18,000-$20,000 range in tuition per year for in-state students (CU’s in-state tuition remains relatively low, about $8,700 per year). The three main sources of tuition revenue are student wages, loans and family savings: All are hard-earned, requiring sacrifices and trade-offs. One of the most important and difficult trade-offs is time. Students who work, like many at CU-Boulder, must balance careful attention to school work with competing commitments to employers and businesses. These broad trends point directly to the need for CU-Boulder’s College of Arts and Sciences to increase endowment funding across the college.  Endowments drive improvements in the quality of an institution and reflect alums, donors and supporters who recognize the importance of research universities in the 21st century. Endowed professorships are the first and most important component of increasing our academic quality. Named chairs recognize significant faculty achievements and help the university support faculty salary and research. CU-Boulder professors are among the most productive in the nation and are heavily recruited by competitors, including Harvard, Yale, Stanford, Cornell, Berkeley, Illinois, UC Irvine and many others. Often, these competitors offer our faculty endowed professorships, conferring prestige and research support. CU must provide its faculty with comparable support to be competitive. A second major area for endowments is student scholarships and, for graduate students, fellowships. A stable source of income that helps pay tuition is the most direct and effective way to offset the costs of education. Endowed scholarships are also effective recruiting tools for admitting the nation’s best to CU.  Our dynamic programs, departments and majors are attracting more and more applicants, including the best in the nation. Like faculty support, endowed scholarships and fellowships confer prestige and, most importantly, allow students to focus entirely on academics without balancing jobs and worrying about future loan repayments. Finally, endowment funding for programs greatly enriches the institution, providing capabilities that are difficult to attain when tuition revenue provides the majority of funding.  Institutions funded mainly by tuition must make sure that expenditures directly benefit students, which sometimes limits options for innovation and risk-taking. Programmatic funding enables faculty and students to take risks in their research and creative work. For example, in my own field, this might involve traveling to an unexplored region to prospect for human fossils or archaeological sites. Support for high-risk projects allows our faculty and students to develop new areas of knowledge, benefitting society by broadening the capacity of the institution to innovate. **The** future **of higher education, including CU’s future, depends to a large degree on how successfully we can build major endowments.  Ultimately, U.S. competitiveness and leadership in the global knowledge economy depends on this as well. For alums, donors and supporters, endowments indelibly affirm the importance of higher education and enduringly preserve its viability and vitality.**

#### Loss of US competitiveness affects countries all around the world – causes widespread poverty.

**Porter and Rivkin:** Michael E. Porter is a University Professor at Harvard, based at Harvard Business School in Boston. Jan W. Rivkin is the Bruce V. Rauner Professor at Harvard Business School. “The Looming Challenge to U.S. Competitiveness.” Harvard Business Review. March 2012. <https://hbr.org/2012/03/the-looming-challenge-to-us-competitiveness>. Recut by RP

The American economy is clearly struggling to recover from a recession of unusual depth and duration, as we are reminded nearly every day. But the United States also faces a less visible but more fundamental challenge: a series of underlying structural changes that could permanently impair America’s ability to maintain, much less raise, the living standards of its citizens. If government and business leaders react only to the downturn and fail to confront America’s deeper challenge, they will revive an economy with weak long-term prospects. During the past year, we have examined U.S. competitiveness with the help of a diverse group of scholars, business leaders from around the world, and the first-ever comprehensive survey of Harvard Business School alumni. Our research suggests that the U.S. faces serious challenges. Too often, America’s leaders, in government and business, have acted in ways that neutralize the country’s many strengths. However, the decline of U.S. competitiveness is far from inevitable. The United States remains the world’s most productive large economy and its largest market for sophisticated goods and services, which stimulates innovation and acts as a magnet for investment. To restore its competitiveness, America needs a long-term strategy. This will require numerous policy changes by government, which may seem unlikely with Washington gridlocked. However, many of the crucial steps can and must be carried out by states and regions, where many of the key drivers of competitiveness reside. More important, business leaders can and must play a far more proactive role in transforming competition and investing in local communities rather than being passive victims of public policy or hostages of misguided shareholders. What Is Competitiveness? America cannot address its economic prospects without a clear understanding of what we mean by competitiveness and how it shapes U.S. prosperity. The concept is widely misunderstood, with dangerous consequences for political discourse, policy, and corporate choices that are all too evident today. The United States is a competitive location to the extent that companies operating in the U.S. are able to compete successfully in the global economy while supporting high and rising living standards for the average American. (We thank Richard Vietor and Matthew Weinzierl for helping to articulate this definition.) A competitive location produces prosperity for both companies and citizens. Lower American wages do not boost U.S. competitiveness. Neither does a cheaper dollar. A weakened currency makes imports more expensive and discounts the price of American exports—in essence, it constitutes a national pay cut. Some steps that reduce firms’ short-term costs, then, actually work against the true competitiveness of the United States. Whether a nation is competitive hinges instead on its long-run productivity—that is, the value of goods and services produced per unit of human, capital, and natural resources. Only by improving their ability to transform inputs into valuable products and services can companies in a country prosper while supporting rising wages for citizens. Increasing productivity over the long run should be the central goal of economic policy. This requires a business environment that supports continual innovation in products, processes, and management. Boosting productivity over the short run by firing workers, as many U.S. firms did at the onset of the Great Recession in 2008, is a reflection not of competitiveness but of weakness. An economy in which many working-age citizens cannot find or do not even seek jobs may appear to enjoy high productivity in the short run, but in fact it has underlying competitiveness problems. It is a nation’s ability to generate high output per employable person—not per currently employed person—that reveals its true competitiveness. Improving competitiveness is not the same as creating jobs. Policy makers can stimulate employment in the short run by artificially boosting demand in labor-intensive local industries not exposed to international competition, such as construction. Creating jobs without improving productivity, however, will not result in sustainable employment that raises the nation’s standard of living. Rather than defining the sole goal as job creation, the U.S. must focus on becoming a more productive location, which will generate high-wage employment growth in America, attract foreign investment, and fuel sustainable growth in demand for local goods and services. Government efforts to stimulate demand are also different from improving competitiveness. Governments commonly play an important role by temporarily increasing outlays to soften the impact of recessions. Such moves may hold up living standards and company performance in the short run, but they typically don’t improve the fundamental drivers of productivity and therefore cannot improve living standards and company performance in the long run. American competitiveness is important not only for firms based or founded in the U.S. but also for foreign firms that operate in the country. Foreign firms contribute to U.S. prosperity if they bring productive activities to the U.S. that provide jobs at attractive wages. U.S. affiliates of foreign firms accounted for nearly 5% of U.S. private employment in 2009. Competitiveness is not a zero-sum game, in which one country can advance only if others lose. Long-term productivity—and, along with it, living standards—can improve in many countries. Global competition is not a fight for a fixed pool of demand; huge needs for improving living standards are waiting to be met around the world. Productivity improvements in one country create new demand for goods and services that firms in other countries can pursue. Greater productivity in, say, India can lead to higher wages and profits there, boosting demand for pharmaceuticals from New Jersey and software from Silicon Valley. Spreading innovation and productivity improvement allows global prosperity to grow. Because the global economy is not a zero-sum game, the decline of American competitiveness is a problem not only for the U.S. The global economy will be diminished if its largest national economy is weak, ceases to be an engine of innovation, and loses its influence in shaping a fair and open global trading system.

#### Innovation solves great power war

**Taylor:** Taylor 4 – Professor of Political Science, Massachusetts Institute of Technology (Mark, “The Politics of Technological Change: International Relations versus Domestic Institutions,” Massachusetts Institute of Technology, 4/1/2004, <http://www.scribd.com/doc/46554792/Taylor)>

 I. Introduction **Technological innovation is of central importance to the study of international relations** (IR), affecting almost every aspect of the sub-field. F**irst and foremost, a nation’s technological capability has a significant effect on its economic growth, industrial might, and military prowess**; therefore relative national technological capabilities necessarily influence the balance of power between states, and hence have a role in calculations of war and alliance formation. **Second, technology and innovative capacity also determine a nation’s trade profile, affecting which products it will import and export, as well as where multinational corporations will base their production facilitie**s. Third, insofar as innovation-driven economic growth both attracts investment and produces surplus capital, a nation’s technological ability will also affect international financial flows and who has power over them. Thus, in broad theoretical terms, technological change is important to the study of IR because of its overall implications for both the relative and absolute power of states. **And if theory alone does not convince, then history also tells us that nations on the technological ascent generally experience a corresponding and dramatic change in their global stature and influence**, such as Britain during the first industrial revolution, the United States and Germany during the second industrial revolution, and Japan during the twentieth century. **Conversely, great powers which fail to maintain their place at the technological frontier generally drift and fade from influence on international scene**. This is not to suggest that technological innovation alone determines international politics, but rather that shifts in both relative and absolute technological capability have a major impact on international relations, and therefore need to be better understood by IR scholars. Indeed, the importance of technological innovation to international relations is seldom disputed by IR theorists. Technology is rarely the sole or overriding causal variable in any given IR theory, but a broad overview of the major theoretical debates reveals the ubiquity of technological causality. For example, from Waltz to Posen, almost all Realists have a place for technology in their explanations of international politics. **At the very least, they describe it as an essential part of the distribution of material capabilities across nations, or an indirect source of military doctrine.** **And for some, like Gilpin quoted above, technology is the very cornerstone of great power domination**, and its transfer the main vehicle by which war and change occur in world politics. Jervis tells us that the balance of offensive and defensive military technology affects the incentives for war. Walt agrees, arguing that technological change can alter a state’s aggregate power, and thereby affect both alliance formation and the international balance of threats. Liberals are less directly concerned with technological change, but they must admit that by raising or lowering the costs of using force, technological progress affects the rational attractiveness of international cooperation and regimes. Technology also lowers information and transactions costs and thus increases the applicability of international institutions, a cornerstone of Liberal IR theory. And in fostering flows of trade, finance, and information, technological change can lead to Keohane’s interdependence or Thomas Friedman et al’s globalization. Meanwhile, over at the “third debate”, Constructivists cover the causal spectrum on the issue, from Katzenstein’s “cultural norms” which shape security concerns and thereby affect technological innovation; to Wendt’s “stripped down technological determinism” in which technology inevitably drives nations to form a world state. However most Constructivists seem to favor Wendt, arguing that new technology changes people’s identities within society, and sometimes even creates new cross-national constituencies, thereby affecting international politics. Of course, Marxists tend to see technology as determining all social relations and the entire course of history, though they describe mankind’s major fault lines as running between economic classes rather than nation-states. **Finally, Buzan and Little remind us that without advances in the technologies of transportation, communication, production, and war, international systems would not exist in the first place.**

#### Extinction outweighs

#### 1] Moral uncertainty means we default to preventing extinction as a side constraint

**Bostrom:** Nick Bostrom, 2001 Professor of Philosophy, Oxford University [Journal of Evolution and Technology, Vol. 9, March 2002. First version: 2001 March, JStor

These reflections on **moral uncertainty suggest[s]** an alternative, complementary way of looking at existential risk. Let me elaborate. Our **[that our] present** understanding of **axiology might well be confused. We may not** now **know**—at least not in concrete detail—**what outcomes would count as a big win for humanity; we might not even yet be able to imagine the best ends of our journey.** **If we are** indeed profoundly **uncertain** about our ultimate aims, **then we should recognize that there is** a **great** option **value in preserving**—and ideally improving—**our ability to recognize value** and to steer the future accordingly. **Ensuring** that there will be **a future version of humanity** with great powers and a propensity to use them wisely **is** plausibly **the best way** available to us **to increase the probability that the future will contain a lot of value.**

#### 2] Social death isn’t equivalent to physical death, which outweighs

Jonas 96 (Hans, Former Alvin Johnson Prof. Phil. – New School for Social Research and Former Eric Voegelin Visiting Prof. – U. Munich, “Morality and Mortality: A Search for the Good After Auschwitz”, p. 111-112)

With this look ahead at an ethics for the future, we are touching at the same time upon the question of the future of freedom. The unavoidable discussion of this question seems to give rise to misunderstandings. My dire prognosis that not only our material standard of living but also our democratic freedoms would fall victim to the growing pressure of a worldwide ecological crisis, until finally there would remain only some form of tyranny that would try to save the situation, has led to the accusation that I am defending dictatorship as a solution to our problems. I shall ignore here what is a confusion between warning and recommendation. But I have indeed said that such a **tyranny would still be better than total ruin**; thus, I have ethically accepted it as an alternative. I must now defend this standpoint, which I continue to support, before the court that I myself have created with the main argument of this essay. For **are we not contradicting ourselves in prizing physical survival at the price of freedom**? Did we not say that freedom was the condition of our capacity for responsibility—and that this capacity was a reason for the survival of humankind?; **By tolerating tyranny as an alternative to physical annihilation are we not violating the principle we established: that the How of existence must not take precedence over its Why?** **Yet we can make a terrible concession to the primacy of physical survival in the conviction that the ontological capacity for freedom, inseparable as it is from man's being, cannot really be extinguished, only temporarily banished from the public realm**. **This conviction can be supported by experience we are all familiar with. We have seen that even in the most totalitarian societies the urge for freedom on the part of some individuals cannot be extinguished, and this renews our faith in human beings.** Given this faith, we have reason to hope that, **as long as there are human beings who survive, the image of God will continue to exist along with them and will wait in concealment for its new hour.** **With that hope**—which in this particular case takes precedence over fear—**it** **is** permissible**, for the sake of physical survival, to accept if need be a temporary absence of freedom in the external affairs of humanity**. This is, I want to emphasize, a worst-case scenario, and it is the foremost task of responsibility at this particular moment in world history to prevent it from happening. This is in fact one of the noblest of duties (and at the same time one concerning self-preservation), on the part of the imperative of responsibility to avert future coercion that would lead to lack of freedom by acting freely in the present, thus preserving as much as possible the ability of future generations to assume responsibility. But more than that is involved. **At stake is the preservation of Earth's entire miracle of creation, of which our human** existence **is a part and before which man reverently bows,** even without philosophical "grounding." Here too faith may precede and reasonfollow; it is faith that longs for this preservation of the Earth (fides quaerens intellectum), and reason comes as best it can to faith's aid with arguments, not knowing or even asking how much depends on its success or failure in determining what action to take. With this confession of faith we come to the end of our essay on ontology.

### Mpx – Scholarship

#### High endowments allow colleges to provide scholarship – that’s key to allowing minorities on campus.

**Freedman:** Freedman, Josh [Contributor, The Atlantic] “Why American Colleges Are Becoming a Force for Inequality.” *The Atlantic.* May 2013. RP

**Not all colleges, however, would need to raise tuition drastically to pay for a larger number of low-income students. Schools with large endowments can cover the shortfall in tuition by drawing money from these reserves**. But keeping tuition constant and paying more from the endowment is only an option for schools with [monstrous endowments](http://www.theamericanconservative.com/articles/paying-tuition-to-a-giant-hedge-fund/). **Many writers cite Amherst College as a success story, which has "aggressively recruited poor and middle-class students in recent years" and has increased its share of low-income students. But Amherst has a very large endowment for the size of its student body. Its strategy is only viable when backed with an endowment of more than three quarters of a million dollars per student from which it can draw additional funds to cover its costs while remaining competitive in its levels of spending.** Amherst is better than others, however. Some schools that already do have sizable endowments and could increase aid are instead decreasing it. Cornell, which has an endowment of about $5 billion, took $35 million from its endowment in 2009-2010 to fund financial aid. It is now [changing its policy](http://www.bloomberg.com/news/2012-08-09/cornell-mit-scale-back-aid-even-as-endowments-rise.html) to draw less from the endowment, which includes lowering its financial aid policies. For GW, with $1.33 billion in its endowment (about 1/18 of Amherst's per student), it's more difficult to use the endowment as a primary backstop. GW only has around 11.7 percent of its endowment, or $155 million, [available for student aid](https://giving.gwu.edu/sites/giving.gwu.edu/files/downloads/endowment_report.pdf). As such, GW - and most selective schools - would only be able to preserve student revenues by raising tuition.

### Mpx – Warming

#### Endowments are key to tech innovation, scholarship, and US competitiveness.

**Leigh:** Leigh, Steven R. [Professor, College of Arts and Sciences] “Endowments and the future of higher education.” March 2014. RP

Prominent universities rely heavily on endowments to support their many academic missions. Yale University, often cited as an exemplar in terms of success in endowments, operates with an endowment of approximately $20 billion, which probably produces enough annual income to pay tuition for every enrolled student.  Income from Yale’s endowment funds a huge spectrum of academic pursuits, ranging from funding for women students in science, to professorships, to outreach programs for local teachers. **A significant endowment makes the university better, allowing the institution to recruit top faculty and students, while funding research and outreach more generally. Endowments help reduce the costs of education in many ways. Most importantly, endowments allow universities to support professors, graduate students and undergraduate students in undertaking visionary, high-risk, high-reward research**. Endowed professorships are reserved for only the most talented professors, and income from endowments helps the university support faculty, students and direct costs of research. Endowments also support student scholarships and programming.  In general, endowments help universities offset educational costs while placing the university on the cutting edge of scholarly discovery, research and creative work. There is a new urgency in seeking better endowment funding across the United States. In 2013, student loan debt for current students and graduates topped $1.08 trillion (<http://rt.com/usa/student-loan-debts-top-trillion-957/>). This number has been driven by declines in state funding for universities and resultant increases in tuition across the United States since 2002. CU-Boulder’s story is among the most stark:  Colorado decreased state funding from 2002 to 2012 by 48 percent, a larger percentage decline than any other state (<http://www.nsf.gov/news/news_summ.jsp?cntn_id=125542>).  Almost all public universities have raised tuition steadily in the last dozen years, and many premiere public institutions have reached the $18,000-$20,000 range in tuition per year for in-state students (CU’s in-state tuition remains relatively low, about $8,700 per year). The three main sources of tuition revenue are student wages, loans and family savings: All are hard-earned, requiring sacrifices and trade-offs. One of the most important and difficult trade-offs is time. Students who work, like many at CU-Boulder, must balance careful attention to school work with competing commitments to employers and businesses. These broad trends point directly to the need for CU-Boulder’s College of Arts and Sciences to increase endowment funding across the college.  Endowments drive improvements in the quality of an institution and reflect alums, donors and supporters who recognize the importance of research universities in the 21st century. Endowed professorships are the first and most important component of increasing our academic quality. Named chairs recognize significant faculty achievements and help the university support faculty salary and research. CU-Boulder professors are among the most productive in the nation and are heavily recruited by competitors, including Harvard, Yale, Stanford, Cornell, Berkeley, Illinois, UC Irvine and many others. Often, these competitors offer our faculty endowed professorships, conferring prestige and research support. CU must provide its faculty with comparable support to be competitive. A second major area for endowments is student scholarships and, for graduate students, fellowships. A stable source of income that helps pay tuition is the most direct and effective way to offset the costs of education. Endowed scholarships are also effective recruiting tools for admitting the nation’s best to CU.  Our dynamic programs, departments and majors are attracting more and more applicants, including the best in the nation. Like faculty support, endowed scholarships and fellowships confer prestige and, most importantly, allow students to focus entirely on academics without balancing jobs and worrying about future loan repayments. Finally, endowment funding for programs greatly enriches the institution, providing capabilities that are difficult to attain when tuition revenue provides the majority of funding.  Institutions funded mainly by tuition must make sure that expenditures directly benefit students, which sometimes limits options for innovation and risk-taking. Programmatic funding enables faculty and students to take risks in their research and creative work. For example, in my own field, this might involve traveling to an unexplored region to prospect for human fossils or archaeological sites. Support for high-risk projects allows our faculty and students to develop new areas of knowledge, benefitting society by broadening the capacity of the institution to innovate. **The** future **of higher education, including CU’s future, depends to a large degree on how successfully we can build major endowments.  Ultimately, U.S. competitiveness and leadership in the global knowledge economy depends on this as well. For alums, donors and supporters, endowments indelibly affirm the importance of higher education and enduringly preserve its viability and vitality.**

#### High quality training and research at colleges is key to solve climate change

**Snibbe:** Snibbe 15 Kris Snibbe, "Colleges have ‘special’ role in fighting climate change," Harvard Gazette, 3/17/2015

**In an address to faculty and students at Tsinghua University today, Harvard President Drew Faust argued forcefully that universities have a unique and critical role to play in combating climate change**. She opened her remarks by recalling her last visit to Tsinghua in 2008. “There is a proverb that the best time to plant a tree is 20 years ago — and the second-best time is now,” Faust told the audience of about 250 Chinese students, faculty, and journalists. “When I first visited Tsinghua seven years ago … I planted a tree with former Tsinghua President Gu Binglin in the Friendship Garden … I am glad the Tsinghua-Harvard tree stands as a symbol of the many relationships across our two universities, relationships which continue to grow and thrive,” she said. “More than ever, it is as a testament to the possibilities that, by working together, we offer the world. That is why I want to spend a few minutes today talking about the special role universities like ours play in addressing climate change.” Faust’s speech marked the culmination of a series of events in Beijing at which climate change was a central topic**. At a gathering of alumni, faculty, and friends on Sunday, she looked on as Ali Malkawi, professor of architectural technology at the Harvard Graduate School of Design (GSD) and founding director of the Harvard Center for Green Buildings and Cities, explained his efforts to reduce the carbon footprint of large human-made structures and systems, from individual buildings to whole cities**. On Monday, Faust and Chinese President Xi Jinping, meeting at the Great Hall of the People, discussed governmental and academic efforts to address the threat of climate change. **Faust used the opportunity to highlight the important work being undertaken by faculty and students at Harvard and at institutions across the globe such as Tsinghua to develop substantive technological and policy solutions to this global challenge and to urge continued faculty collaborations**. “Last November, President Xi and President Obama made a joint announcement on climate change, pledging to limit the greenhouse gas emissions of China and the United States over the next several decades,” Faust said. “It is a landmark accord, setting ambitious goals for the world’s two largest carbon-emitting countries and establishing a marker that presidents Xi and Obama hope will inspire other countries to do the same. “**We could not have predicted such a shared commitment seven years or even one year ago between these two leaders — both, in fact, our alumni — one a Tsinghua graduate in chemical engineering and the humanities and the other a graduate of Harvard Law School,” she continued**. “And yet our two institutions had already sown the seeds of this agreement decades ago by educating leaders who can turn months of discussion into an international milestone, and by collaborating for more than 20 years on the climate analyses that made the agreement possible. In other words, by doing the things universities are uniquely designed to do.” Calling the recent agreement a “defining moment … worthy of celebration,” and giving China credit for building the world’s largest wind-power capacity as well as the second-largest capacity in solar energy, Faust nonetheless said that these efforts represent “only a beginning” of what needs to be done. “Industry, education, agriculture, business, finance, individual citizens — all are necessary participants in what must become an energy and environmental revolution, a new paradigm that will improve public health, care for the planet, and put both of our nations on the path toward a prosperous, low-carbon economy,” she argued. “Universities are especially good at ‘thinking different,’ ” Faust said in her prepared text, quoting an expression often used by Apple founder Steve Jobs. “**To every generation falls a daunting task. This is our task: to ‘think different’ about how we inhabit the Earth. Where better to meet this challenge than in Boston and Beijing? How better to meet it than by unlocking and harnessing new knowledge, building political and cultural understanding, promoting dialogue, and sharing solutions? Who better to meet it than you, the most extraordinary students — imaginative, curious, daring. The challenge we face demands three great necessities.” Faust made the case that the three great necessities of creating partnerships, undertaking research, and training students to ask and answer the big questions ultimately will yield substantive solutions to this global challenge.**

#### Warming causes racism, sexism and endless structural violence

David Naguib Pellow 12, Ph.D. Professor, Don Martindale Endowed Chair – University of Minnesota, “Climate Disruption in the Global South and in African American Communities: Key Issues, Frameworks, and Possibilities for Climate Justice,” February 2012, <http://www.jointcenter.org/sites/default/files/upload/research/files/White_Paper_Climate_Disruption_final.pdf>

It is now known unequivocally that significant warming of the atmosphere is occurring, coinciding with increasing levels of atmospheric CO2. Dr. John Holdren, Director of the White House Office of Science and Technology Policy, prefers the term “global climate disruption” to “climate change” because it more fully captures the harm being done to the planet (Holdren 2007). The term “climate change” infers a naturally occurring process rather than a disruption created by specific human activity. Moreover, the terms “global warming” and “climate change” might be construed as occurring in a uniform, even, gradual, and benign fashion, none of which is true. One solid indicator of Holdren’s point is the fact that climate disruptions affect communities, nations, and regions of the globe in vastly different ways. While contributing the least of anyone to the causes of climate disruption, people of color, women, indigenous communities, and global South nations often bear the brunt of climate disruption in terms of ecological, economic, and health burdens—thereby giving rise to the concept of climate injustice (Roberts and Parks 2007). These communities are among the first to experience the effects of climate disruption, which can include “natural” disasters, rising levels of respiratory illness and infectious disease, heat-related morbidity and mortality, and large increases in energy costs. They also bear the burdens created by ill-conceived policies designed to prevent climate disruption. The effects of climate injustice have been evident for years. Flooding from severe storms, rising sea levels and melting glaciers affect millions in Asia and Latin America, while sub-Saharan Africa is experiencing sustained droughts. Consider that nearly 75 percent the world’s annual CO2 emissions come from the global North, where only 15 percent of the global population resides. If historic responsibility for climate change is taken into account, global North nations have consumed more than three times their share of the atmosphere (in terms of the amount of emissions that we can safely put into the atmosphere) while the poorest 10 percent of the world’s population has contributed less than 1 percent of carbon emissions. Thus the struggle for racial, gender, and economic justice is inseparable from any effort to combat climate disruption. Climate justice is a vision aimed at dissolving and alleviating the unequal burdens created by climate change. The topic of climate justice is a major point of tension in both U.S. and international policy efforts to address climate disruption because it would require wealthy nations that have contributed the most to the problem to take on greater responsibilities for solutions. For many observers, the path is clear: for humanity’s survival, for justice, and for sustainability, they maintain that we must reduce our emissions and consumption here at home in the global North.

#### We’re on the brink of the point of no return from warming – it’ll cause extinction, nuclear war, and structural violence.

**Sharp and Kennedy 14**, Robert Sharp [Associate Professor Robert (Bob) A. Sharp is the UAE National Defense College Associate Dean for Academic Programs and College Quality Assurance Advisor. He previously served as Assistant Professor of Strategic Security Studies at the College of International Security Affairs (CISA) in the U.S. National Defense University (NDU), Washington D.C. and then as Associate Professor at the Near East South Asia (NESA) Center for Strategic Studies, collocated with NDU. Most recently at NESA, he focused on security sector reform in Yemen and Lebanon, and also supported regional security engagement events into Afghanistan, Turkey, Egypt, Palestine and Qatar] and Edward Kennedy [Edward Kennedy is a renewable energy and climate change specialist who has worked for the World Bank and the Spanish Electric Utility ENDESA on carbon policy and markets], “Climate Change and Implications for National Security”, International Policy Digest, 22 Aug 2014, BE

Over the 250 years carbon fuels have enabled tremendous technological advances including a population growth from about 800 million then to 7.5 billion today and the consequent demand to extract even more carbon. This has occurred during a handful of generations, which is hardly noticeable on our imaginary one-year calendar. The **release of this** **carbon –** however **– is changing our climate at such a rapid rate that it threatens our** survival and presence on earth. It defies imagination that so much damage has been done in such a relatively short time. The **implications of climate change are the single most significant threat to life on earth and, put simply, we are not doing enough to rectify the damage**. This relatively very recent ability to change our climate is an inconvenient truth; the science is sound. We know of the complex set of interrelated national and global security risks that are a result of global warming and the velocity at which climate change is occurring. We worry it may already be too late. **Climate change** writ large has informed few, interested some, confused many, and polarized politics. **It has already led to an increase in natural disasters including but not limited to droughts, storms, floods, fires etc**. The year 2012 was among the 10 warmest years on record according to an American Meteorological Society (AMS) report. **Research suggests that climate change is already affecting human displacement; reportedly 36 million people were displaced in 2008 alone** **because of sudden natural disasters.** Figures for 2010 and 2011 paint a grimmer picture of people displaced because of rising sea levels, heat and storms. Climate change affects all natural systems. It impacts temperature and consequently it affects water and weather patterns. It contributes to desertification, deforestation and acidification of the oceans. Changes in weather patterns may mean droughts in one area and floods in another. Counter-intuitively, perhaps, sea levels rise but perennial river water supplies are reduced because glaciers are retreating. As glaciers and polar ice caps melt, there is an albedo effect, which is a double whammy of less temperature regulation because of less surface area of ice present. This means that less absorption occurs and also there is less reflection of the sun’s light. A potentially critical wild card could be runaway climate change due to the release of methane from melting tundra. Worldwide permafrost soils contain about 1,700 Giga Tons of carbon, which is about four times more than all the carbon released through human activity thus far. The planet has already adapted itself to dramatic climate change including a wide range of distinct geologic periods and multiple extinctions, and at a pace that it can be managed. It is human intervention that has accelerated the pace dramatically: An increased surface temperature, coupled with more severe weather and changes in water distribution will create uneven threats to our agricultural systems and will foster and support the spread of insect borne diseases like Malaria, Dengue and the West Nile virus. **Rising sea levels will increasingly threaten our coastal population and infrastructure centers and with more than 3.5 billion people – half the planet – depending on the ocean for their primary source of food, ocean acidification may dangerously undercut critical natural food systems which would result in reduced rations**. Climate change also carries significant inertia. Even if emissions were completely halted today, temperature increases would continue for some time. **Thus the impact is not only to the environment, water, coastal homes, agriculture and fisheries as mentioned, but also would** lead to conflict **and thus impact national security.** Resource wars are inevitable **as countries respond, adapt and compete for the shrinking set of those available resources**. These wars have arguably already started and will continue in the future because climate change will force countries to act for national survival; the so-called Climate Wars. As early as 2003 Greenpeace alluded to a report which it claimed was commissioned by the Pentagon titled: An Abrupt Climate Change Scenario and Its Implications for U.S. National Security. It painted a picture of a world in turmoil because global warming had accelerated. The scenario outlined was both abrupt and alarming. The report offered recommendations but backed away from declaring climate change an immediate problem, concluding that it would actually be more incremental and measured; as such it would be an irritant, not a shock for national security systems. In 2006 the Center for Naval Analyses (CNA) – Institute of Public Research – convened a board of 11 senior retired generals and admirals to assess National Security and the Threat to Climate Change. Their initial report was published in April 2007 and made no mention of the potential acceleration of climate change. The team found that climate change was a serious threat to national security and that it was: “most likely to happen in regions of the world that are already fertile ground for extremism.” The team made recommendations from their analysis of regional impacts which suggested the following. **Europe would experience some fracturing because of border migration. Africa would need more stability and humanitarian operations provided by the United States. The Middle East would experience a “loss of food and water security (which) will increase pressure to emigrate across borders.” Asia would suffer from “threats to water and the spread of infectious disease.”** In 2009 the CIA opened a Center on Climate Change and National Security to coordinate across the intelligence community and to focus policy. In May 2014, CNA again convened a Military Advisory Board but this time to assess National Security and the Accelerating Risk of Climate Change. The report concludes that **climate change is no longer a future threat but occurring** right now and the authors appeal to the security community, the entire government and the American people to not only build resilience against projected climate change impacts but to form agreements to stabilize climate change and also to integrate climate change across all strategy and planning. The calm of the 2007 report is replaced by a tone of anxiety concerning the future coupled with calls for public discourse and debate because “time and tide wait for no man.” The report notes a key distinction between resilience (mitigating the impact of climate change) and agreements (ways to stabilize climate change) and states that: Actions by the United States and the international community have been insufficient to adapt to the challenges associated with projected climate change. Strengthening resilience to climate impacts already locked into the system is critical, but this will reduce long-term risk only if improvements in resilience are accompanied by actionable agreements on ways to stabilize climate change. The 9/11 Report framed the terrorist attacks as less of a failure of intelligence than a failure of imagination. Greenpeace’s 2003 account of the **Pentagon’s alleged report describes a coming climate Armageddon** which to readers was unimaginable and hence the report was not really taken seriously. It described: **A world thrown into turmoil by drought, floods, typhoons. Whole countries rendered uninhabitable. The capital of the Netherlands submerged. The borders of the U.S. and Australia patrolled by armies firing into waves of starving boat people desperate to find a new home. Fishing boats armed with cannon to drive off competitors. Demands for access to water and farmland backed up with nuclear weapons**. The CNA and Greenpeace/Pentagon reports are both mirrored by similar analysis by the World Bank which highlighted not only the physical manifestations of climate change, but also the significant **human impacts that threaten to unravel decades of economic development, which will ultimately foster conflict.**

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# Frontlines

## Uniqueness

### Top Level

#### Donations to colleges growing at rapid rate – survey of 983 colleges proves

Lederman 16 [Doug Lederman (editor, co-founder of Inside Higher Ed), "In Giving to Colleges, the One Percenters Gain," Inside Higher Ed, 1/27/2016] AZ

The Council for Aid to Education's study is one of a handful of annual reports (along with today's on endowments, last week's on state support for higher education, and some others) that provide a baseline sense of the state of higher education finances. The survey drew fund-raising information from 983 institutions, and it extrapolates from those results to estimate total giving for 3,900 colleges and universities. The 7.6 percent rise revealed for 2015 by the council's survey, which followed a 10.8 percent gain from 2013 to 2014, was driven largely by giving from individuals (alumni and not), which increased sharply. Donations from foundations and corporations, meanwhile, were either modest or flat, as seen in the table below. Continuing a trend of recent years, the amount of money donated by alumni rose sharply, by 10.2 percent, to $10.85 billion, but the proportion of alumni who contributed fell to 8.4 percent, from 8.6 percent. (It was 11.7 percent in 2007.) Ann E. Kaplan, who directs the survey, attributed the decline mostly to the fact that digital and other technologies are helping colleges track down more alumni. "Participation will only increase if the number of donors rises more than the number of located alumni," Kaplan said in a news release. "This is unlikely in a technological age in which individuals may have multiple means of contact that make them easy to locate. Finding an address is much simpler than cultivating a relationship that leads to a contribution." Giving by nonalumni individuals (donors, parents, etc.) rose by more than any other category, 23.1 percent. Donations for current operations (as opposed to capital purposes) rose by 13.1 percent in fiscal 2015, while funds for endowments, facilities and other purposes were flat. The study attributes the latter result to the fact that there was a huge -- 23.3 percent -- rise the previous year (fiscal 2014) in gifts to restricted endowments, which is the largest category of capital purposes. That kind of donation tends to track the stock market, which was stronger in 2014 than in 2015.

#### Donations are increasing now towards public universities.

**Applegate**: Applegate, Jamie [Journalist; B.A., U.C. Berkeley] “Survey Shows Increased Reliance on Private Donations to Fund Public Universities.” *The Daily Californian*, 2012. RP

**A survey released Wednesday shows an increase in private donations toward public universities, indicating a shift toward a 1 funding model that seeks to fill the gaps left by large cuts to state funding with an increased reliance on philanthropy. The Voluntary Support of Education survey conducted by the Council for Aid to Education found that charitable contributions to colleges and universities across the country increased 8.2 percent in 2011, reaching a total of $30.3 billion in donations. UC Berkeley — which ranked in the top 20 earners along with UCLA and UC San Francisco — has increased its efforts toward raising private funds through a campaign emulating those of private universities**. David Blinder, UC Berkeley’s associate vice chancellor for university relations, said that with state funding having dropped to a total of $220 million this year, funding from private donors has become an important part of the way the campus funds itself. UC Berkeley ranked 18th in the survey, with a total of $283.35 million in donations in 2011. “Tuition is now a major source of revenue in a way that historically it wasn’t for public colleges, as well as philanthropy,” Blinder said. “Philanthropy was always key in the private university world. That was their life blood, whereas we had traditionally relied on public support. We did need to learn from the privates.” In 2005, the Campaign for Berkeley was created with the goal of raising $3 billion by 2013, in order to channel funds toward undergraduate scholarships, faculty chairs and research, among other endeavors. Campaign spokesperson Jose Rodriguez said $2.34 billion had been raised as of Dec. 31, 2011. A similar five-year fundraising campaign at Stanford University — **The Stanford Challenge — raised $6.2 billion upon its conclusion in February, enough to build or renovate 38 buildings, provide funding for 139 new endowed faculty positions and create 366 new graduate fellowships. Stanford ranked first in the survey’s list of top fundraising universities, with a total of $709.42 million in donations received in 2011. Despite the increasing importance of private funding, UCLA spokesperson Phil Hampton said it should not be seen as a major solution for tight budgets.** UCLA ranked eighth in the survey as the top fundraising public university, garnering $415.03 million in support in 2011. “It’s important to know that private giving cannot be seen as a replacement of state funding,” Hampton said. “Most gifts come with restrictions and are intended for specific uses — uses that aren’t funded by direct state support.” Private support for university needs that are not funded directly by the state — such as endowments and capital projects — increased 13.6 percent in 2011 and “follows declining or stagnant levels of giving in recent years,” the survey states. Private fundraising might be more difficult for public universities to engage in because of a lack of alumni awareness of a need for such funding, according to John Douglass, a senior research fellow at the Center for Studies in Higher Education at UC Berkeley. “The fact is it will be very difficult for nothing but the name-brand, elite public universities to generate large donations to help subsidize the operating costs of the vast majority of public college and universities,” Douglass said in an email. “The alumni of public institutions on average come from less affluent parts of society and have less to give.” However, Blinder said that much of the success of UC Berkeley’s fundraising campaign has been motivated by an increasing awareness on the part of donors that public universities need more financial support to replace lost state funding. “For a while, it was difficult to get that message across,” Blinder said. “We are a state university, and we’re committed to the mission, but at this point, the figure is that just over 10 percent of our budget is coming from the state.”

#### State funding for public colleges is on a downward trajectory – donors make up for the loss. Harnisch ‘10/28

Thomas Harnisch serves as the Director of State Relations and Policy Analysis at the American Association of State Colleges and Universities (AASCU) “Trending to Zero: The Lasting Impact of Total State Disinvestment from Public Higher Education.” The Evolution. October 28, 2016. <https://evolllution.com/managing-institution/government_legislation/trending-to-zero-the-lasting-impact-of-total-state-disinvestment-from-public-higher-education/> JJN

The term “privatization” is frequently invoked to describe the current and future state of public higher education. The label is used as shorthand for the shift away from state funding and toward tuition and other private revenue streams. State funding cuts for public colleges and universities have produced an evolving administrative model increasingly influenced by corporate-style management, where market-driven metrics replace mission statements and where reliance on revenues from campus assets, donors, out-of-state student enrollment and other non-public sources fill the gap left by ever-diminishing state appropriations. Public university privatization has been years in the making. According to the Pell Institute, state funding efforts for public higher education today stand at 55 percent of what they were in 1980. While the presidential campaign—particularly Bernie Sanders’ proposal to make public colleges free—has created some political pressure in the opposite direction, absent a radical realignment of federal and state funding practices, the disinvestment trend is expected to accelerate due to projected growth in other state budget items. While states often increase funding for public higher education during stronger budget cycles, the increases typically do not make up for the cuts from difficult years, and state funding patterns suggest an inexorable downward trajectory.

#### Survival for most colleges relies on donor support. Vise ‘11

Daniel de Vise – Author and Journalist at Washington Post. “Public colleges tap private funds as state support dwindles.” Washington Post. July 2, 2011. <https://www.washingtonpost.com/local/education/public-colleges-tap-private-funds-as-state-support-dwindles/2011/06/29/AGHiWQvH_story.html?utm_term=.c4f99cada77a> JJN

As state subsidies for higher education are dwindling, public colleges in the Washington region and elsewhere are learning they must tap private funds to survive. Fundraising by George Mason University rose from $3 million in 1990 to $32 million in 2010, according to an industry survey by the Council for Aid to Education. After adjusting for inflation, that amounts to a nearly four-fold increase. The survey showed donations to the University of Maryland Baltimore County surged from about $1 million to $8 million in that span. Towson University’s fundraising climbed from $1 million to $6 million. Such fundraising campaigns, echoed in other states, come as legislatures across the nation are cutting higher education budgets. Per-student state funding has dwindled from $8,035 in 2000 to $6,451 in 2010 nationwide, in inflation-adjusted dollars, according to the State Higher Education Executive Officers. The trend has spawned dark humor. Public colleges, some in the field say, have evolved from state-supported to state-assisted to state-located. “We are at, in the current fiscal year, the lowest funding level in 30 years. And it’s clearly going to get worse,” said Dan Hurley, director of state relations and policy analysis at the American Association of State Colleges and Universities. Young, ambitious state institutions such as George Mason are playing a desperate game of catch-up against an elite group of older universities with billion-dollar endowments and a long tradition of giving. Johns Hopkins University, Georgetown University and the University of Virginia each raise hundreds of millions of dollars a year. Even the flagship University of Maryland, a relative upstart, took in $87 million in fiscal year 2010. Legislatures are shifting the cost of college to students: public university tuition has nearly doubled nationwide in the past decade. Most public colleges have relied on state funding and student tuition for nearly all their revenue. Now, they are looking to build other funding sources, turning to private donors with unprecedented vigor. Flagship public universities are insulated against the state funding losses, partly on the strength of massive fundraising operations. Even before the decline in state funding, the University of Virginia drew only one quarter of its revenue from Richmond. Other state institutions are more vulnerable. State cuts drove Virginia Commonwealth University to an unprecedented 24 percent tuition increase in 2010. George Mason hasn’t raised faculty salaries in three years. Around the region, state universities are hiring fewer tenure-track professors, allowing class sizes to grow and pressing student lounges into use as teaching spaces. George Mason, a onetime U-Va. branch campus that gained independence in 1972, relied on the state for 60 percent of its operating budget as recently as a decade ago. Today, that share has fallen below 30 percent. Per-student state funding has dropped from $5,319 in 2001 to $3,238 in 2011, in constant dollars. Twenty years ago, “fundraising in any aggressive way was simply not on the radar screen” of regional state universities and younger research universities, said Gary Rubin, vice president for university advancement at Towson. The typical college raises private dollars largely from a small group of wealthy and older alumni. Plaques on ancient campus buildings bespeak the tradition of giving.

### A2 Wang

#### It goes negative – even if donations are declining, they’re still plenty high.

**Wang:** Wang, Amy X. [Contributor, Quartz] “Why alumni donations to Yale and other US colleges are hitting a new low.” *Quartz.* February 2016. RP

**To** **snag those precious alumni donations in the future, schools will have to get a lot more persuasive. That’s not to say they’re exactly struggling for cash, though: Thanks to mega-donations from rich individual donors, American universities still netted a record $40 billion in 2015.**

## Link

### Top Level

#### Administrators need the ability to regulate speech to maintain donations

Press and Student Nation ‘16 [ALEX PRESS is a PhD student in sociology based in Boston. STUDENTNATION First-person accounts from student activists, organizers and journalists reporting on youth-oriented movements for social justice, economic equality and tolerance. “Silence on Campus: Contingent Work and Free Speech.” The Nation. February 17, 2016. https://www.thenation.com/article/silence-on-campus-contingent-work-and-free-speech.

﻿**Corporatization creates a dilemma for higher education: College, unlike most businesses, serves a social function—the production and transfer of knowledge—the achievement of which requires an environment of intellectual freedom that can conflict with profit margins, as some actors central to the model, such as donors, may take issue with controversial speech.** In the past, tenure resolved some of this tension—once professors gain tenure, they’re walled off from these pressures, at least theoretically. With the erosion of tenure and a slack academic job market, free speech disappears as professors become increasingly disposable. As Steven Vallas, a sociologist at Northeastern University who researches the changing nature of work, argues, a professor’s right to speak freely presumes a foundation of job stability. “If you have an expansion of the adjunct, precarious professoriate, than you really are eroding the proportion of people who can speak their mind.” In contrast to claims that censorious students are the central threat to the ability of college to serve as a marketplace of ideas, the silencing of speech that comes with a sense of one’s disposability appears much more powerful. Conceding the difficulty of capturing the preemptive stifling of debate that comes with disposable worker status, we can take the severity of repercussions visited upon those who don’t censor themselves as indicative of the problem. Take the case of Steven Salaita, an indigenous studies scholar whose offer of a position at the University of Illinois at Urbana–Champaign was rescinded after he tweeted critically about Israel’s 2014 attack on Gaza. A violation of academic freedom that resulted in a rare formal censure from the AAUP, for Salaita, administrative censorship is no secret. “For the uninitiated, the levels of vitriol and retribution that attend criticism of Israel can be stunning,” he writes, referencing a report authored by the Center for Constitutional Rights and Palestine Legal that details hundreds of reported acts of suppression of pro-Palestine advocacy in under two years. **Salaita sued the University of Illinois for violating his rights. While he settled out of court for $875,000, discovery findings from his lawsuit reveal the likelihood of donor influence on the decision to fire him, with the chancellor communicating with donors about Salaita’s tweets and his possible dismissal. As Salaita’s case demonstrates, the extent of donor pressure goes a long way to explain why administrations might choose to silence speech, explains William Robinson, a professor at the University of California–Santa Barbara. In 2009, Robinson caught the attention of outside organizations that then pressured UCSB administrators to charge him with violating the university’s academic code of conduct, according to Robinson’s account of the incident, as well as details published by his supporters. Explaining the role financial needs play in decisions to censor faculty in public higher education, Robinson argues, “As public funding is cut, the administration becomes more reliant on private donors. These donors then use that leverage, threatening to withdraw donations if an administration doesn’t act.” The problem is worsening as public funds for higher education are drying up across the country, according to a recent report by the Center on Budget and Policy Priorities. As this money dwindles, administrations turn to wealthy donors, creating the conditions under which prestigious donors can sway administrator’s decisions on how to respond to controversial faculty, if those faculty can get hired in the first place.**

#### Donors will withdraw funds for colleges that allow hate speakers because they dislike campus violence – UC Berkeley proves.

**Moreno February 2017:** Moreno, Amy [Contributor, Truthfeed] “BREAKING : UC Berkeley Loses Major Donor.” *Truthfeed.* February 4, 2017. RP

**Scott Adams, the creator of the popular comic strip Dilbert got his MBA at UC Berkeley and has remained a top donor, both in money and time. After the recent riots, where Democrat terrorists “Antifa” set fires, vandalized property and beat Trump supporters unconscious, Adams had pulled his funding from the troubled liberal university**. Here’s the best article you are likely to read about the absurdity of calling ANY American president Hitler. This is the sort of persuasion (sprinkled with facts) that can dissolve some of the post- election cognitive dissonance that hangs like a dark cloud over the country. Share it liberally, so to speak. You might save lives. Speaking of Hitler, **I’m ending my support of UC Berkeley, where I got my MBA years ago. I have been a big supporter lately, with both my time and money, but that ends today. I wish them well, but I wouldn’t feel safe or welcome on the campus**. A Berkeley professor made that clear to me recently. He seems smart, so I’ll take his word for it. I’ve decided to side with the Jewish gay immigrant who has an African-American boyfriend, not the hypnotized zombie- boys in black masks who were clubbing people who hold different points of view. I feel that’s reasonable, but I know many will disagree, and possibly try to club me to death if I walk on campus. Yesterday I asked my most liberal, Trump-hating friend if he ever figured out why Republicans have most of the Governorships, a majority in Congress, the White House, and soon the Supreme Court. He said, “There are no easy answers.” I submit that there are easy answers. But for many Americans, cognitive dissonance and confirmation bias hide those easy answers behind Hitler hallucinations. I’ll keep working on clearing the fog. Estimated completion date, December 2017. It’s a big job.

#### Alumni will exert pressure to condemn hate speech – Vassar proves.

**The MN:** The Miscellany News [Official campus newspaper at Vassar College] “Admin has responsibility to effectively counter hate speech.” *The Miscellany News.* February 2016. RP

**In light of the campus climate surrounding the BDS resolution and the Israel-Pales tine conflict, a string of antisemitic and Islamaphobic hate speech has been circulating the anonymous online forum of Yik Yak. In the past two weeks, President Hill and Dean Roellke responded to these incidents via campus-wide emails that addressed this toxic and antagonistic social media behavior, as well as Vassar’s campus climate in general**. Dean Roellke’s email, sent on Feb. 16, ex pressed his concern for the way that a small number of people within the Vassar commu nity had been acting and urged these voices to stop treating their classmates and peers at Vassar with “contempt and intolerance.” The email continued by quoting a passage from the Vassar College Student Handbook regarding students’ obligation to be respect ful and accepting of their community at large. While the emails sent out by President Hill and Dean Roellke do acknowledge the hate speech occurring throughout campus, we at The Miscellany News believe this initial response by the Administration was insufficient. The emails’ accusatory tone effectively condemned the behavior of the student body but did not offer any tangible, meaningful solutions moving forward. Dean Roellke’s email in particular read as condescending, a chastisement that offered no concrete help or plan. We at The Miscel lany News believe that these campus climate problems cannot be solved on their own and require the whole-hearted support of the Administration Toxic exchanges featuring antisemitism and Islamophobia have also taken hold in spaces outside of campus. The discourse of BDS can not be boxed in by the confines of Raymond Avenue. A host of articles, including a recent piece from The Observer written by a Vassar alumni, and a piece written a few days ago by the Daily News entitled “Hatred on the Hudson” have discussed the BDS resolution climate and labeled Vassar as an antisemitic institution whose administration is in sup port of said ideals. **The College is experiencing a barrage of outside scrutiny from alumnae/i in the form of letters, emails and social media.** The Ad - ministration calls for us to all “get along” on campus, yet we wonder what this means for those voices that continue to pour in from off campus. Where do the alumnae/i voices and opinions lie in this dialogue and who is regulating them to make sure discourse re mains accessible and safe? We acknowledge that this outside pres sure from alumnae/i and external publica tions puts the Administration in a difficult position both from a moral and a financial standpoint. It is likely that they may not know how to act and navigate through this complex and loaded dialogue that affects multiple moving parts within the campus and network psyche. Still, their initial confusion should not result in general inaction. Despite pressure from the alumnae/i, the Administration’s goals should be to protect the student body that populates the school right now, protect ing those students who have been hurt and victimized by the spiteful discourse of BDS itself. Although it is impossible to eliminate on line forums such as Yik Yak, students and administrators must make attempts to re spond to the damage that this anonymous discourse can cause. Much of the recent controversy has sur rounded visiting speakers who deliver po larizing lectures on campus. Students can be unaware of these extreme opinions and feel shocked and insulted in the lecturer’s aftermath, leading to extreme reactions and a climate of anger on campus. To help placate this, we at The Miscellany News propose an administrative system in which orgs that feel strongly about a visiting lecturer would be able to put forth a short statement or opinion that would appear on the campus calendar next to the event list ing. With research, it is not difficult to un derstand a speaker’s fundamental beliefs; however, this information needs to be more easily accessible to students so that they know who has been invited to speak before the lecture begins. Orgs that feel passionate ly in favor of or against a lecturer can then use their research to serve as mediators be tween the speaker and the general student body, thus creating a stronger dialogue sur rounding the event and opening up spaces for students to respond safely. In addition to this written input about controversial lectures, it would be valuable for the orgs sponsoring these events to host pre- or post- lecture discussions. We believe that post-lecture discussions, as Students for Justice in Palestine recently offered, give students the opportunity to debrief and dis cuss what they have just heard in a construc tive way. Though conversation is not comparable to anonymous hate speech, providing these outlets for discussion promotes an atmo sphere of constructive exchange that does not encourage the same hostility anonymous social media does. **We believe that the responsibility of the Administration lies in taking immediate action to respond to incidents that have al ready occurred**. Punishment is not an option for the anonymous perpetrators. What mat - ters most now is focussing on the victims of charged attacks instead of sending emails that accomplish little beyond chastising the entire student body. We need an administra tion that isn’t afraid to take meaningful mea sures to protect its students. On Monday morning, the Bias Incident Response Team sent out an email that an nounced the creation of upcoming spaces for student sharing and healing. We at The Miscellany News believe that this type of restorative space is a step in the right direc tion. These spaces focus on the victims and on recovery, dealing with the hate speech inci dents in a way that is constructive. Beyond this, it is important to remind students that are not necessarily comfortable with sharing in a public space of the resources that are available to them, such as CARES and The Listening Center. **The anonymous hate of recent weeks has contributed to a toxic campus environment that all members of the Vassar community have a responsibility to respond to**. As we work towards respectful discourse, we must analyze the problems that exist and do what is in our power to work towards a safer cam pus. Michael Weiner '91 says: The connection of alumni to Vassar is as strong, or stronger, than that of current students. We worked for our degrees and paid for them too. We have worn our affiliation to the College proudly, until now. As long as Vassar continues to ask for alumni donations, participation in on campus/off campus programming and help in interviewing prospective students and promoting the Vassar brand, we have a seat at the table. Get used to it, soon you will be one of us. One of those Alumni '05 says: The people acting outraged about Vassar don’t understand what the school has been like for decades – it has always been a place where viewpoints from merely radical to extravagantly ridiculous have been welcomed. Sometimes this plays out to such an extreme that Vassar becomes an unwitting parody of itself, but it also can be one of the great aspects of the university. You have to appreciate it for what it is and maintain a bit of a sense of humor about it. So while I wholeheartedly disagree with the BDS crowd, I’m neither surprised nor particularly disappointed. I do hope there are those on campus who are able to effectively articulate, not unabashedly pro-Israel notions, but at least ones that acknowledge the nuances of the reality there. In any case, let people develop ideas and fight for them – and let those ideas live or die on their merits (or lack thereof if descriptions of this Professor Puar’s lecture are accurate). That’s what discourse is about. Now, what does worry me is this growing emphasis on ‘safe’ discourse. For example, I was extremely disappointed to see Vassar is falling victim to the trigger warning brigade. Or, to borrow from this article (speaking of becoming a parody of yourself): “On Monday morning, the Bias Incident Response Team sent out an email that announced the creation of upcoming spaces for student sharing and healing.” This type of thing is what takes a student body known for its proud advocacy of ideas and turns it into a bunch of timorous adolescents. Vassar at its best is a place where people aren’t afraid to speak, be challenged, and challenge. Being sheltered from ideas, books, or viewpoints you deem hurtful is not ‘safe’ in my book, it’s ‘sanitized’. Paul Mansour '87 says: This excellent editorial poses an important question: “Where do the alumnae/i voices and opinions lie in this dialogue and who is regulating them to make sure discourse re mains accessible and safe?” Americans are more more and committed to fair speech as a replacement for so-called “free speech”, which is nothing more than a few dusty words in a 100 year old document written by privileged dead white men. “Free speech” is like most constitutional rights, a negative right – the right to be left alone and free from government interference. As President Obama has rightly noted, the constitutional framers did not go far enough with respect to rights. What we need are positive rights, the right to a good job, a house, healthcare, and perhaps most importantly, the right to a safe space, free from harmful thoughts and speech. Fair speech requires regulation. Is is horrifying that alumnae/i speech is allowed unregulated on campus, just like the disastrous Citizens United case. Vassar should follow the lead of progressive companies like Twitter and institute a “Trust and Safety Council”. This body would centralize the regulation of all outside speech, providing a single resource for students to voice their complaints. It could write fair rules for all speech originating off campus, ensuring that the entire campus is a safe space. All across Europe, “free speech” is being reigned in to provide safe spaces for the marginalized and the disenfranchised, When has Europe ever been wrong? Who is more in need of protection than the typical Vassar student? It is distressing that Vassar President Hill hides behind the euphemism of “free-speech” in a misguided attempt to defend the patriarchal privilege of the past. Ruth **Manfredi '90 says: Hundreds of alumni are appalled by the lack of tolerance** on Vassar’s campus. We believe in respectful debate, critical analysis and freedom of speech. **We do not believe that a small group of faculty, students and speakers should use “freedom of speech” as an excuse for hate speech. We believe that every single Vassar student has the right to feel comfortable** at Vassar **and not be discriminated against** or ostracized based on race, religion, gender, or sexual orientation. **We are working** with students, faculty, AAVC and the Administration **to support change** and create an environment of tolerance at Vassar.

#### Empirics confirm – donors cut back funding at University of Illinois after a professor used hateful speech.

**Press:** Press, Alex [The Nation] “Silence on Campus: Contingent Work and Free Speech.” *The Nation.* February 2016. RP

**Conceding the difficulty of capturing the preemptive stifling of debate that comes with disposable worker status, we can take the severity of repercussions visited upon those who don’t censor themselves as indicative of the problem. Take the case of Steven Salaita, an indigenous studies scholar whose offer of a position at the University of Illinois at Urbana–Champaign was rescinded after he tweeted critically about Israel’s 2014 attack on Gaza**. A violation of academic freedom that resulted in a rare formal censure from the AAUP, for Salaita, administrative censorship is no secret. “For the uninitiated, the levels of vitriol and retribution that attend criticism of Israel can be stunning,” he writes, referencing a report authored by the Center for Constitutional Rights and Palestine Legal that details hundreds of reported acts of suppression of pro- Palestine advocacy in under two years. Salaita sued the University of Illinois for violating his rights. **While he settled out of court for $875,000, discovery findings from his lawsuit reveal the likelihood of donor influence on the decision to fire him, with the chancellor communicating with donors about Salaita’s tweets and his possible dismissal. As Salaita’s case demonstrates,** the extent of donor pressure goes a long way to explain why administrations might choose to silence speech, explains William Robinson, a professor at the University of California– Santa Barbara. In 2009, Robinson caught the attention of outside organizations that then pressured UCSB administrators to charge him with violating the university’s academic code of conduct, according to Robinson’s account of the incident, as well as details published by his supporters. **Explaining the role financial needs play in decisions to censor faculty in public higher education, Robinson argues, “As public funding is cut, the administration becomes more reliant on private donors. These donors then use that leverage, threatening to withdraw donations if an administration doesn’t act**.”

#### Protests on college campuses involving unrestricted speech kills funding and endowments.

**Hartocollis:** Hartocollis, Anemona [Contributor, The New York Times] “College Studetns Protest, Alumni’s Fondness Fades, and Checks Shrink.” *The New York Times.* August 2016. RP

Scott MacConnell cherishes the memory of his years at Amherst College, where he discovered his future métier as a theatrical designer. But protests on campus over cultural and racial sensitivities last year soured his feelings. Now Mr. MacConnell, who graduated in 1960, is expressing his discontent through his wallet. In June, he cut the college out of his will. “As an alumnus of the college, I feel that I have been lied to, patronized and basically dismissed as an old, white bigot who is insensitive to the needs and feelings of the current college community,” **Mr. MacConnell, 77, wrote in a letter to the college’s alumni fund in December, when he first warned that he was reducing his support to the college to a token $5. A backlash from alumni is an unexpected aftershock of the campus disruptions of the last academic year. Although fund-raisers are still gauging the extent of the effect on philanthropy, some colleges — particularly small, elite liberal arts institutions — have reported a decline in donations, accompanied by a laundry list of complaints. Alumni from a range of generations say they are baffled by today’s college culture.** Among their laments: Students are too wrapped up in racial and identity politics. They are allowed to take too many frivolous courses. They have repudiated the heroes and traditions of the past by judging them by today’s standards rather than in the context of their times. Fraternities are being unfairly maligned, and men are being demonized by sexual assault investigations. And university administrations have been too meek in addressing protesters whose messages have seemed to fly in the face of free speech. Scott C. Johnston, who graduated from Yale in 1982, said he was on campus last fall when activists tried to shut down a free speech conference, “because apparently they missed irony class that day.” **He recalled the Yale student who was videotaped screaming at a professor, Nicholas Christakis, that he had failed “to create a place of comfort and home” for students in his capacity as the head of a residential college. “I don’t think anything has damaged Yale’s brand quite like that,” said Mr. Johnston, a founder of an internet start-up and a former hedge fund manager. “T**his is not your daddy’s liberalism.” “The worst part,” he continued, “is that campus administrators are wilting before the activists like flowers.” Yale College’s alumni fund was flat between this year and last, according to Karen Peart, a university spokeswoman. Among about 35 small, selective liberal arts colleges belonging to the fund- raising organization Staff, or Sharing the Annual Fund Fundamentals, that recently reported their initial annual fund results for the 2016 fiscal year, 29 percent were behind 2015 in dollars, and 64 percent were behind in donors, according to a steering committee member, Scott Kleinheksel of Claremont McKenna College in California. His school, which was also the site of protests, had a decline in donor participation but a rise in giving. **At Amherst, the amount of money given by alumni dropped 6.5 percent for the fiscal year that ended** June 30, and participation in the alumni fund dropped 1.9 percentage points, to 50.6 percent, the lowest participation rate since 1975, when the college began admitting women, according to the college. The amount raised from big donors decreased significantly. Some of the decline was because of a falloff after two large reunion gifts last year, according to Pete Mackey, a spokesman for Amherst. **At Princeton, where protesters unsuccessfully demanded the removal of Woodrow Wilson’s name from university buildings and programs, undergraduate alumni donations dropped 6.6 percent from a record high the year before, and participation dropped 1.9 percentage points**, according to the university’s website. A Princeton spokesman, John Cramer, said there was no evidence the drop was connected to campus protests. Carolyn A. Martin, Amherst’s president, said she was not surprised that student protests had contributed to the decline in fund-raising. “I think colleges are places where complicated societywide issues are always thrashed out, sometimes across generations,” Dr. Martin, known as Biddy, said in an interview. Dr. Martin defended Amherst as a place where free speech and high standards still held sway, and said she had pushed back against protesters when necessary. Much of the alumni unrest at Amherst crystallized around the college’s decision to renounce its unofficial mascot, Lord Jeffery Amherst, known as Lord Jeff, an 18th-century British commander in the French and Indian War who gave his name to the town and, by extension, the college. A new generation of students has criticized his attitude toward Native Americans; he endorsed the idea of spreading smallpox among enemy tribes by giving them infected blankets. “He hated the Indians, because any general in his position would have,” said Gordon Hall III, class of ’52, a commercial real estate investor. He and Don MacNaughton, class of ’65, a retired lawyer and a history buff, wrote a booklet concluding that Lord Jeff had been unfairly maligned. Mr. MacNaughton paid for his share of its publication and promotion online with thousands of dollars he would have otherwise given to the college. “I feel that money is going to the benefit of Amherst College, in any event,” Mr. MacNaughton said. The older generation remembers Lord Amherst not as a genocidal warmonger, but as the inspiration for a beloved college fight song, written by a member of the class of 1906. The song, which Mr. Hall, 86, can still sing by heart, winks knowingly at Lord Amherst’s misdeeds with the line, “To the Frenchman and the Indians, he didn’t do a thing.” Mr. Hall, whose grandfather, father, uncles and son went to Amherst, archly calls himself “a powerhouse of nepotism.” But he has endowed a scholarship and says he welcomes students whose backgrounds are different from his. “I get letters every year about the recipient of my scholarship fund,” he said. “The name will always be a name that is ethnically or racially — you can tell — not like Hall. And so be it. You’ve got to go with the flow to some degree.” But, he wonders, “where did this supercorrectness thing come from?” In the category of supercorrectness, some alumni note that in March, a new director of the Women’s and Gender Center asked to be addressed as “they,” rather than “he” or “she.” “This is not a joke,” Paul Ruxin, who identified himself as “Old Curmudgeon class of ’65,” wrote to his classmates shortly before he died in April. David Pennock, class of ’60, one of four generations of his family to have gone to Amherst, is so invested in the college that he bridles at incorrect pronunciations of the name. “Our Amherst is pronounced without the H,” he said. His Amherst was tough but paternalistic, he said. When he fell behind in classes, the admissions dean, Eugene Wilson, class of ’29 and his father’s fraternity roommate, took him trout fishing on the Deerfield River and warned that he was headed for the “underachiever program,” a forced leave of absence. As class agent, Mr. Pennock did not reduce his giving, but he is one of a group of alumni pushing for the return of a core curriculum. Robert Longsworth, class of ’99, the seventh in his family to have attended Amherst, has been the president of the New York City alumni association and a class agent. But he has withdrawn, he said, because of his sense that the college has become “so wrapped up in this politically charged mission rather than staying in its lane and being an institution of higher education.” Mr. Longsworth, 39, who works in the financial industry, said he thought erasing history only made people more vulnerable to racism. “When the administration and faculty and ultimately a lot of the student body spends a great deal of time on witch hunts, I think that a lot of that intellectual rigor is forgone,” he said. Mr. Longsworth said he had heard from “friends who went to Hamilton, Trinity, Williams, Bates, Middlebury, Hobart, who are not pleased at what’s happened on campus, and they’ve kind of stepped away.” **For these alumni, he said, refusing to write a check “seems to be the only lever that can make a difference.”**

#### Protests and speech on campus kills donations – University of Missouri proves.

**Keller:** Keller, Rudi [Contributor, Columbia Daily Tribune] “University of Missouri fundraising takes $6 million hit in December as donors hold back funds.” *Columbia Daily Tribune.* February 2016. RP

**New pledges and donations to the University of Missouri fell $6 million in December as the campus weathered the fallout of public discontent that also threatens to erode the school’s finances via state support and tuition revenue**. December combines Christmas generosity and the promise of tax deductions on returns due April 15, making it a prime time for fundraisers at major institutions. In December 2014, new pledges and donations for all campus activities including athletics totaled $19.6 million, according to figures compiled by the university’s advancement office. Only $13.6 million came in this December, a drop of about 31 percent. The figures represent new commitments and donations that are not given in fulfillment of previous pledges, Vice Chancellor of University Advancement Tom Hiles said. For the three complete months since campus protests made international news in November, new pledges and donations to MU declined by about $7.4 million. Along with the decrease in new support, pledges totaling about $2 million were withdrawn, Hiles said. About 10 were gifts of $25,000 or more, including one for $500,000, he said. Total new pledges and donations in fiscal year 2015 totaled $147.6 million, down from a record $164.1 million in fiscal year 2014. The advancement office has fielded more than 2,000 calls from people upset with the university and tracks them by topic on a heat map. “It ran the gamut from” Assistant Professor Melissa “Click to Planned Parenthood to just a general lack of leadership,” Hiles said. “‘**Who’s in charge? Are the students running it?’ If I heard inmates are running the asylum one more time I was going to** ... . Those were the general categories.” **Student demonstrations over racism and marginalization on campus made international headlines** after the Tiger football team announced it would boycott athletic activities in support of a hunger strike by Concerned Student 1950 member Jonathan Butler. Athletic donations also have dipped, including a 68 percent drop in December cash gifts compared to December 2014 and a 38 percent decline in new pledges and donations as tallied in Hiles’ office during November, December and January. The Athletic Department’s decreased fundraising over that period — $1.3 million — is included in the total campus decline of $7.4 million. Giving by smaller donors, defined as those who give less than $10,000, declined by about 5 percent in the three-month period, with drops in November and December somewhat offset by a January increase in giving. Small donors gave or pledged $4.76 million in the period, down from $5.02 million the previous year. “We definitely got hit in our annual fund and other points,” Hiles said. “It was rough because normally December is our best month.” While his office fielded calls, Hiles said staff members researched callers who said they would never donate again. The result, he said, was “about a 90 percent correlation with people who ... have never given.” The final word on other financial issues is unresolved. A House committee already has denied the university a portion of the budget increase allocated to other state colleges and universities. Chairwoman Donna Lichtenegger, R-Jackson, cited Click’s continued employment and a demonstration that interrupted a UM System Board of Curators meeting for the cut. At a Wednesday hearing of the Joint Committee on Education, interim MU Chancellor Hank Foley said figures show an anticipated enrollment drop of 900 students, which roughly equates to a $20 million loss of tuition revenue. For the year to date overall, new pledges and donations are well ahead of the previous fiscal year because Rich and Nancy Kinder pledged $25 million in October to launch the Kinder Institute on Constitutional Democracy. Without that gift, the year-to-date total would have decreased by $8.7 million. “We are not actually off in terms of donations,” Foley told the joint committee. “In terms of overall donations, we are doing quite well.” Foley said he has “spent a fair amount of time speaking to donors.” The university launched its “Mizzou: Our Time to Lead” campaign Oct. 8 with a goal of raising $1.3 billion; several events were linked to Homecoming weekend at MU. **Protests by Concerned Student 1950 also started that weekend when several students blockaded the Homecoming parade and stopped then-UM System President Tim Wolfe’s car. It was another problem for an administration already beset by troubles, including faculty members and deans upset by former Chancellor R. Bowen Loftin’s administrative style**. Graduate assistants were rebelling over a loss of health insurance coverage, and the bad blood between Wolfe and Loftin was being played out in closed curators meetings. **Wolfe resigned on Nov. 9, and Click was caught on camera later that day trying to push a videographer away from the protest site and calling for “some muscle” to help**. Click has dominated headlines since Nov. 9, with 117 lawmakers signing letters calling for her dismissal and the curators putting her on paid suspension while her actions are investigated.

#### The fiat of the plan entails rejecting endowments, otherwise speech would be restricted.

**Kurtz:** Kurtz, Stanley [Contributor, National Review] “A Plan to Restore Free Speech on Campus.” *The Corner.* December 2015. RP

**Fifth: Colleges and universities ought to adopt policies on institutional political neutrality** based on the University of Chicago’s Kalven Committee Report of 1967. **The Kalven Report explains that the ability of a university to foster political dissent and criticism by faculty and students actually depends upon the political neutrality of the institution itself.** The principles of academic freedom and institutional neutrality embodied in the Kalven Report are the surest antidote to demands that universities divest themselves of stock in fossil-fuel providers, Israeli companies, and other political targets. Advocates who attempt to inject universities into the political process by means of their endowments substantially inhibit the intellectual freedom of faculty and students who wish to explore contrary points of view. **The National Association of Scholars’ recent reports on campus sustainability and fossil-fuel divestment detail the illiberal implications of these movements**. The American Council of Trustees and Alumni includes the text of the Kalven Report and an excellent commentary by civil libertarian attorney Harvey Silverglate in its guide to academic freedom. Trustees should take note.

#### Colleges face pressures to maintain their brand, so they have to be PC

**Sleeper 16**Jim Sleeper, polisci prof @ Yale and Alternet reporter, “What the Campus 'Free Speech' Crusade Won't Say” http://www.alternet.org/education/what-campus-free-speech-crusade-wont-say-0

When the FIRE and the larger conservative “free speech” campaign assail university administrators for curbing individual rights, they often wind up exposing but then fudging an inexorable reality: **The more market-driven a college, the more anxious it is to restrict free speech, because most deans and trustees serve not politically correct pieties but market pressures to satisfy student “customers” and to avoid negative publicity, liability, and losses in “brand” or “market share.” The real enemy of open inquiry and expression is the over-financialized, corrupt investment that the FIRE and its funders never question and, indeed, are out to defend.**

### A2 Most Still Give

#### That doesn’t matter – each individual donor often gives a lot of money, so losing a single donor could be millions down the drain.

#### University of Missouri proves that it’s a lot of money – millions are lost when endowments are slashed.

**Keller:** Keller, Rudi [Contributor, Columbia Daily Tribune] “University of Missouri fundraising takes $6 million hit in December as donors hold back funds.” *Columbia Daily Tribune.* February 2016. RP

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### A2 Michaelson [Ollie Card]

#### Give this evidence little to no credence – its one line and highly unwarranted

#### Their evidence is about trigger warnings, but the plan doesn’t affect those – they don’t infringe upon free speech.

**Gueren:** Gueren, Casey [Contributor, Buzzfeed News] “10 Things Psychologists Want You To Know About Trigger Warnings.” *Buzzfeed News.* September 2016. RP

4. **However, they’re not meant to obstruct free speech or dictate what a professor is and isn’t allowed to teach. This doesn’t mean that colleges need to limit any discussion of potentially triggering material like rape, murder, war, eating disorders, or alcohol. “I think what a lot of people hear is that we’re never going to teach a course about X, and that it’s interfering with academic freedom,” says Goldston. “And I just don’t think it’s doing that.” A trigger warning should function as exactly that: a warning to students who may need time to prepare (mentally, physically, or otherwise) so that they can ideally engage with the material in a controlled setting, instead of being blindsided in a crowded lecture hall.**

## Internal Link

### A2 Doesn’t Go to Scholarship

-You can read the other impact cards as internal link args in the 2NR [probably not the quality of edu one though]

#### Meta studies prove they’re wrong – more endowments means more scholarship and higher quality of education.

**Kowarski:** Kowarski, Illana [Contributor, US News] “10 Universities With the Biggest Endowments.” *US News.* October 2016. RP

**Colleges with large endowments generally have more money available to spend on academic programs, school facilities, extracurricular activities, research and financial aid, and these schools can afford to recruit distinguished professors**. In addition, large [college](http://colleges.usnews.rankingsandreviews.com/best-colleges) endowments indicate a school has exceptionally wealthy alumni and generous donors. The growth of U.S. college endowments slowed in fiscal year 2015 with an average growth rate of 2.4 percent compared with 15.5 percent in 2014, according to a [national survey of 812 colleges and universities](http://www.nacubo.org/Research/NACUBO-Commonfund_Study_of_Endowments/Public_NCSE_Tables.html). Slower growth in endowments may be a problem for universities. Schools turn to their endowments for, on average, nearly 10 percent of their operating funds, said John D. Walda, president and CEO of the National Association of College and University Business Officers, in a written statement. "**Lower returns may make it even tougher for colleges and universities to adequately fund financial aid, research, and other programs that are very reliant on endowment earnings and are vital to institutions’ missions." The 10 colleges with the largest endowments in fiscal year 2015 are the same as in 2014, and Harvard University remains the clear front-runner with an endowment of $37.6 billion**. Nine of the 10 increased the size of their endowments in fiscal year 2015. The one exception is Texas A&M University—College Station, whose endowment was $9.75 billion in 2015 compared with $10.52 billion in 2014. Texas A&M came in eighth among the 1,146 ranked colleges that reported these data to U.S. News in an annual survey, compared with sixth place in the prior version of this list**. All of the colleges with the biggest endowments are**[**National Universities**](http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-universities) **– schools that emphasize research and offer not only bachelor's degrees but also master's and doctoral degrees**. Among the 10 colleges with the largest endowments at the end of fiscal year 2015, the average endowment was $16.9 billion compared with $16.2 billion in 2014. The median U.S. college endowment at the end of fiscal year 2015 was $58.8 million. Below is a list of the 10 universities with the largest endowments at the end of fiscal year 2015. Endowments were examined by campus, not across public university systems. Unranked schools, which did not meet certain criteria required by U.S. News to be numerically ranked, were not considered for this report.

#### Prefer this evidence on method and recency

**Kowarski:** Kowarski, Illana [Contributor, US News] “10 Universities With the Biggest Endowments.” *US News.* October 2016. RP

**U.S. News surveyed more than 1,800 colleges and universities for our 2016 survey of undergraduate programs. Schools self-reported myriad data regarding their academic programs and the makeup of their student body, among other areas, making U.S. News' data the most accurate and detailed collection of college facts and figures of its kind**. While U.S. News uses much of this survey data to rank schools for our annual Best Colleges rankings, the data can also be useful when examined on a smaller scale. U.S. News will now produce lists of data, separate from the overall rankings, meant to provide students and parents a means to find which schools excel, or have room to grow, in specific areas that are important to them. While the data come from the schools themselves, these lists are not related to, and have no influence over, U.S. News' rankings of [Best Colleges](http://colleges.usnews.rankingsandreviews.com/best-colleges), [Best Graduate Schools](http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools) or [Best Online Programs](http://www.usnews.com/education/online-education). The endowment data above are correct as of Oct. 4, 2016.

#### Endowments do go towards scholarship in public universities, and they make a massive difference.

**The AB:** Arkansas Business [News organization] “College Endowments in Arkansas Increase in Importance.” July 2016. RP

**Endowments have always been important to private colleges and universities, but public higher education, which has experienced flat state funding or even declines in recent years, is joining private schools in its appreciation for the financial gifts that comprise endowments**. This is the first year Arkansas Business has published a list of the largest college and university endowments in the state, so some explanation is in order. Endowments are money or other assets donated to a college or university. **Those assets are then invested--usually fairly conservatively--so they yield an income above the principal, and schools seek to constantly grow that principal. The University of Arkansas had, by far, the largest endowment in 2015, $948.7 million, according to the National Association of College & University Business Officers and the Commonfund Institute. Its endowment allows the UA "to attract and retain top faculty as well as top undergrads and graduate students**," a university spokesman said. At second place is Hendrix College in Conway, with an endowment of $181.9 million in 2015, according to the NACUBO and the institute. However, Hendrix's endowment stands most recently, as of May 31, at $186.8 million, according to Ellis Arnold, dean of advancement at Hendrix (see Executive Q&A on Page 22). Philip Jackson is president of the Arkansas State University System Foundation, a non-profit that holds and manages all of the ASU System endowment assets. The ASU Joint Committee on University Investments, which includes both volunteer participants--some of them board members--and system employees, oversees the endowment, which totaled $54.9 million in 2015.Over the past five years--not including the most recent, fiscal 2016, which ended June 30--the endowment has seen a return of 8.07 percent, Jackson said. The investments are "fairly standard stuff," he said, domestic and international equities, bonds, fixed-income assets, cash and "some alternative investing. And by alternative, I mean some private equity, commercial real estate, that kind of thing." The endowment and its growth are important to the university. **Many of the scholarships available to A-State students are funded by private resources, both endowment and non-endowment scholarship assets, Jackson said. "Especially in today's environment of increasing tuition and cost to students, all forms of financial aid are significant, and one part of that, of course, is the private scholarships we offer." "Also, endowments are not limited to scholarships," he said. They're used to fund research, for professorships, endowed chairs, which "help attract quality faculty and promote faculty development." Sixty to 65 percent of A-State's endowment income goes to private scholarship funding; the rest goes to faculty development, research and student-oriented programs**, Jackson said. The Arkansas State University System Foundation is a "philanthropic partner" with the advancement efforts of the system, which includes the four-year school in Jonesboro and four two-year colleges: ASU-Beebe, ASU-Mountain Home, ASU-Newport and ASU-Mid-South in West Memphis. For the endowment to provide the same purchasing power, "the same bang for the buck, so to speak, in years to come as we have now, we can't do that unless we grow the principal," Jackson said. Endowments at private colleges and universities tend to be much larger because the schools don't receive state funding and rely more on endowment income. Bryan Burks, vice president of advancement at Harding University in Searcy, which is No. 3 on the list with an endowment of $117.9 million, said that "at a private institution, gifts are crucial for the ongoing operation of the organization because there's not the funding from the state or federal government like there is at a public institution." "Our endowment primarily comes from individuals," as opposed to organizations, he said. And many of those gifts come through estates and wills. Jackson agreed that the decline in public support for higher education had increased the importance of endowments and "private support in general, not just endowments." "The role of private support is far more significant in light of reduced state support," he said. "I've been at ASU for 31 years, and the level of state support has declined and declined--seems to--every year consistently." "The response to that has been greater use of private support as well as a greater need for the university to engage in entrepreneurial-type activities and find different revenue streams," Jackson said. "That would not necessarily be done in an endowment, but universities themselves have to figure out ways to generate revenue."

## Impact

### Yes Great Power War

## Warming Impact

### Race XT Ev

#### Allowing warming to continue perpetuates racist inequalities

Hoerner ‘8**—**Former director of Research at the Center for a Sustainable Economy, Director of Tax Policy at the Center for Global Change at the University of Maryland College Park, and editor of Natural Resources Tax Review. He has done research on environmental economics and policy on behalf of the governments of Canada, France, Germany, the Netherlands, Switzerland, and the United States. Andrew received his B.A. in Economics from Cornell University and a J.D. from Case Western Reserve School of Law—AND—Nia Robins—former inaugural Climate Justice Corps Fellow in 2003, director of Environmental Justice and Climate Change Initiative (J. Andrew, “A Climate of Change African Americans, Global Warming, and a Just Climate Policy for the U.S.” July 2008, <http://www.ejcc.org/climateofchange.pdf>)

Everywhere we turn, the issues and impacts of climate change confront us. One of the most serious environmental threats facing the world today, climate change has moved from the minds of scientists and offices of environmentalists to the mainstream. Though the media is dominated by images of polar bears, melting glaciers, flooded lands, and arid desserts, there is a human face to this story as well. Climate change is not only an issue of the environment; it is also an issue of justice and human rights, one that dangerously intersects race and class. All over the world people of color, Indigenous Peoples and low-income communities bear disproportionate burdens from climate change itself, from ill-designed policies to prevent it, and from side effects of the energy systems that cause it. A Climate of Change explores the impacts of climate change on African Americans, from health to economics to community, and considers what policies would most harm or benefit African Americans—and the nation as a whole. African Americans are thirteen percent of the U.S. population and on average emit nearly twenty percent less greenhouse gases than non-Hispanic whites per capita. Though far less responsible for climate change, African Americans are significantly more vulnerable to its effects than non- Hispanic whites. Health, housing, economic well-being, culture, and social stability are harmed from such manifestations of climate change as storms, floods, and climate variability. African Americans are also more vulnerable to higher energy bills, unemployment, recessions caused by global energy price shocks, and a greater economic burden from military operations designed to protect the flow of oil to the U.S. Climate Justice: The Time Is Now Ultimately, accomplishing climate justice will require that new alliances are forged and traditional movements are transformed. An effective policy to address the challenges of global warming cannot be crafted until race and equity are part of the discussion from the outset and an integral part of the solution. This report finds that: Global warming amplifies nearly all existing inequalities. Under global warming, injustices that are already unsustainable become catastrophic. Thus it is essential to recognize that all justice is climate justice and that the struggle for racial and economic justice is an unavoidable part of the fight to halt global warming. Sound global warming policy is also economic and racial justice policy. Successfully adopting a sound global warming policy will do as much to strengthen the economies of low-income communities and communities of color as any other currently plausible stride toward economic justice. Climate policies that best serve African Americans also best serve a just and strong United States. This paper shows that policies well-designed to benefit African Americans also provide the most benefit to all people in the U.S. Climate policies that best serve African Americans and other disproportionately affected communities also best serve global economic and environmental justice. Domestic reductions in global warming pollution and support for such reductions in developing nations financed by polluter-pays principles provide the greatest benefit to African Americans, the peoples of Africa, and people across the Global South. A distinctive African American voice is critical for climate justice. Currently, legislation is being drafted, proposed, and considered without any significant input from the communities most affected. Special interests are represented by powerful lobbies, while traditional environmentalists often fail to engage people of color, Indigenous Peoples, and low-income communities until after the political playing field has been defined and limited to conventional environmental goals. A strong focus on equity is essential to the success of the environmental cause, but equity issues cannot be adequately addressed by isolating the voices of communities that are disproportionately impacted. Engagement in climate change policy must be moved from the White House and the halls of Congress to social circles, classrooms, kitchens, and congregations. The time is now for those disproportionately affected to assume leadership in the climate change debate, to speak truth to power, and to assert rights to social, environmental and economic justice. Taken together, these actions affirm a vital truth that will bring communities together: Climate Justice is Common Justice. African Americans and Vulnerability In this report, it is shown that African Americans are disproportionately affected by climate change. African Americans Are at Greater Risk from Climate Change and Global Warming Co-Pollutants ¶ • The six states with the highest African American population are all in the Atlantic hurricane zone, and are expected to experience more intense storms resembling Katrina and Rita in the future. ¶ • Global warming is expected to increase the frequency and intensity of heat waves or extreme heat events. African Americans suffer heat death at one hundred fifty to two hundred percent of the rate for non-Hispanic whites. ¶ • Seventy-one percent of African Americans live in counties in violation of federal air pollution standards, as compared to fifty-eight percent of the white population. Seventy-eight percent of African Americans live within thirty miles of a coal-fired power plant, as compared to fifty-six percent of non-Hispanic whites. ¶ • Asthma has strong associations with air pollution, and African Americans have a thirty-six percent higher rate of incidents of asthma than whites. Asthma is three times as likely to lead to emergency room visits or deaths for African Americans. ¶ • This study finds that a twenty-five percent reduction in greenhouse gases—similar to what passed in California and is proposed in major federal legislation—would reduce infant mortality by at least two percent, asthma by at least sixteen percent, and mortality from particulates by at least 6,000 to 12,000 deaths per year. Other estimates have run as high as 33,000 fewer deaths per year. A disproportionate number of the lives saved by these proposed reductions would be African American. African Americans Are Economically More Vulnerable to Disasters and Illnesses ¶ • In 2006, twenty percent of African Americans had no health insurance, including fourteen percent of African American children—nearly twice the rate of non-Hispanic whites. ¶ • In the absence of insurance, disasters and illness (which will increase with global warming) could be cushioned by income and accumulated wealth. However, the average income of African American households is fifty-seven percent that of non-Hispanic whites, and median wealth is only one-tenth that of non-Hispanic whites. ¶ • Racist stereotypes have been shown to reduce aid donations and impede service delivery to African Americans in the wake of hurricanes, floods, fires and other climate-related disasters as compared to non-Hispanic whites in similar circumstances. African Americans Are at Greater Risk from Energy Price Shocks ¶ • African Americans spend thirty percent more of their income on energy than non-Hispanic whites. • Energy price increases have contributed to seventy to eighty percent of recent recessions. The increase in unemployment of African Americans during energy caused recessions is twice that of non-Hispanic whites, costing the community an average of one percent of income every year. • Reducing economic dependence on energy will alleviate the frequency and severity of recessions and the economic disparities they generate. African Americans Pay a Heavy Price and a Disproportionate Share of the Cost of Wars for Oil • Oil company profits in excess of the normal rate of profit for U.S. industries cost the average household $611 in 2006 alone and are still rising. • The total cost of the war in Iraq borne by African Americans will be $29,000 per household if the resulting deficit is financed by tax increases, and $32,000 if the debt is repaid by spending cuts. This is more than three times the median assets of African American households. A Clean Energy Future Creates Far More Jobs for African Americans • Fossil fuel extraction industries employ a far lower proportion of African Americans on average compared to other industries. Conversely, renewable electricity generation employs three to five times as many people as comparable electricity generation from fossil fuels, a higher proportion of whom are African American. ¶ • Switching just one percent of total electricity generating capacity per year from conventional to renewable sources would result in an additional 61,000 to 84,000 jobs for African Americans by 2030. ¶ • A well-designed comprehensive climate plan achieving emission reductions comparable to the Kyoto Protocol would create over 430,000 jobs for African Americans by 2030, reducing the African American unemployment rate by 1.8 percentage points and raising the average African American income by 3 to 4 percent.

### Extinction

#### The Sharp and Kennedy 14 evidence crushes their studies

**A. Cites 5 scenarios for extinction – nuclear war, resource conflicts, melting ice caps, displacement, hunger,**

**B. Qualification – they’re experts and professors who cite reports by the Pentagon**

#### Warming outweighs---only existential risk

**New York Times:** The New York End Times is a non-partisan, non-religious, non-ideological, free news filter. We monitor world trends and events as they pertain to two vital threats---war and extinction. We use a proprietary methodology to quantify movements between the extremes of war and peace, harmony and extinction. <http://newyorkendtimes.com/extinctionscale.as>. 2006.

We rate Global Climate Change as a greater threat for human extinction in this century. Most scientists forecast disruptions and dislocations, if current trends persist. The extinction danger is more likely if we alter an environmental process that causes harmful effects and leads to conditions that make the planet uninhabitable to humans. Considering that there is so much that is unknown about global systems, we consider climate change to be the greatest danger to human extinction. However, there is no evidence of imminent danger. Nuclear war at some point in this century might happen. It is unlikely to cause human extinction though. While several countries have nuclear weapons, there are few with the firepower to annihilate the world. For those nations it would be suicidal to exercise that option. The pattern is that the more destructive technology a nation has, the more it tends towards rational behavior. Sophisticated precision weapons then become better tactical options. The bigger danger comes from nuclear weapons in the hands of terrorists with the help of a rogue state, such as North Korea. The size of such an explosion would not be sufficient to threaten humanity as a whole. Instead it could trigger a major war or even world war. Under this scenario human extinction would only be possible if other threats were present, such as disease and climate change. We monitor war separately. However we also need to incorporate the dangers here.

#### Warming collapses global sustainability—outweighs nuclear war

Doebbler 2011.

[Curtis, International Human Rights Lawyer. Two threats to our existence. Ahram Weekly. July 2011. <http://weekly.ahram.org.eg/2011/1055/envrnmnt.htm>, CMR]

**No other threat** -- **including war**, **nuclear disasters**, **rogue regimes**, **terrorism**, or the fiscal irresponsibility of governments -- is reliably predicted to cause **so much harm to** so many people on earth, and indeed to **the earth itself.** The **I**nternational **P**anel on **C**limate **C**hange, which won the Nobel Prize for its evaluation of thousands of research studies to provide us accurate information on climate change, has predicted that under the current scenario of "business-as-usual", temperatures could rise by as much as **10 degrees** Celsius in some parts of the world. This would have horrendous consequences for the most vulnerable people in the world. Consequences that the past spokesman of 136 developing countries, Lumumba Diaping, described as the equivalent of sending hundreds of millions of Africans to the furnace. Yet for more than two decades, states have failed to take adequate action to either prevent climate change or to deal with its consequences. A major reason for this is that many wealthy industrialised countries view climate change as at worst an inconvenience, or at best even a potential market condition from which they can profit at the expense of developing countries. Indeed, history has shown them that because of their significantly higher levels of population they have grown rich and been able to enslave, exploit and marginalise their neighbours in developing countries. They continue in this vein.

#### Science proves—it causes extinction and outweighs nuclear war

Deibel 2007

[Terry L. Deibel, professor of IR @ National War College, 2007, Foreign Affairs Strategy, Conclusion: American Foreign Affairs Strategy Today, CMR]

Droughts, floods, and violent storms Consensus Disease and Illness 26% of GDP—Economy Thermohaline circulation collapse Runaway green house warming Positive Feedback, H2O vapor More true than Nuclear Winter Finally, there is one major existential threat to American security (as well as prosperity) of a nonviolent nature, which, though far in the future, demands urgent action. It is the threat of global warming to the stability of the climate upon which all earthly life depends. Scientists worldwide have been observing the gathering of this threat for three decades now, and what was once a mere possibility has passed through probability to near certainty. Indeed not one of more than 900 articles on climate change published in refereed scientific journals from 1993 to 2003 doubted that anthropogenic warming is occurring. “In legitimate scientific circles,” writes Elizabeth Kolbert, “it is virtually impossible to find evidence of disagreement over the fundamentals of global warming.” Evidence from a vast international scientific monitoring effort accumulates almost weekly, as this sample of newspaper reports shows: an international panel predicts “brutal droughts, floods and violent storms across the planet over the next century”; climate change could “literally alter ocean currents, wipe away huge portions of Alpine Snowcaps and aid the spread of cholera and malaria”; “glaciers in the Antarctic and in Greenland are melting much faster than expected, and…worldwide, plants are blooming several days earlier than a decade ago”; “rising sea temperatures have been accompanied by a significant global increase in the most destructive hurricanes”; “NASA scientists have concluded from direct temperature measurements that 2005 was the hottest year on record, with 1998 a close second”; “Earth’s warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year” as disease spreads; “widespread bleaching from Texas to Trinidad…killed broad swaths of corals” due to a 2-degree rise in sea temperatures. “The world is slowly disintegrating,” concluded Inuit hunter Noah Metuq, who lives 30 miles from the Arctic Circle. “They call it climate change…but we just call it breaking up.” From the founding of the first cities some 6,000 years ago until the beginning of the industrial revolution, carbon dioxide levels in the atmosphere remained relatively constant at about 280 parts per million (ppm). At present they are accelerating toward 400 ppm, and by 2050 they will reach 500 ppm, about double pre-industrial levels. Unfortunately, atmospheric CO2 lasts about a century, so there is no way immediately to reduce levels, only to slow their increase, we are thus in for significant global warming; the only debate is how much and how serious the effects will be. As the newspaper stories quoted above show, we are already experiencing the effects of 1-2 degree warming in more violent storms, spread of disease, mass die offs of plants and animals, species extinction, and threatened inundation of low-lying countries like the Pacific nation of Kiribati and the Netherlands at a warming of 5 degrees or less the Greenland and West Antarctic ice sheets could disintegrate, leading to a sea level of rise of 20 feet that would cover North Carolina’s outer banks, swamp the southern third of Florida, and inundate Manhattan up to the middle of Greenwich Village. Another catastrophic effect would be the collapse of the Atlantic thermohaline circulation that keeps the winter weather in Europe far warmer than its latitude would otherwise allow. Economist William Cline once estimated the damage to the United States alone from moderate levels of warming at 1-6 percent of GDP annually; severe warming could cost 13-26 percent of GDP. But the most frightening scenario is runaway greenhouse warming, based on positive feedback from the buildup of water vapor in the atmosphere that is both caused by and causes hotter surface temperatures. Past ice age transitions, associated with only 5-10 degree changes in average global temperatures, took place in just decades, even though no one was then pouring ever-increasing amounts of carbon into the atmosphere. Faced with this specter, the best one can conclude is that “humankind’s continuing enhancement of the natural greenhouse effect is akin to playing Russian roulette with the earth’s climate and humanity’s life support system. At worst, says physics professor Marty Hoffert of New York University, “we’re just going to burn everything up; we’re going to heat the atmosphere to the temperature it was in the Cretaceous when there were crocodiles at the poles, and then everything will collapse.” During the Cold War, astronomer Carl Sagan popularized a theory of nuclear winter to describe how a thermonuclear war between the Untied States and the Soviet Union would not only destroy both countries but possible end life on this planet. Global warming is the post-Cold War era’s equivalent of nuclear winter at least as serious and considerably better supported scientifically. Over the long run it puts dangers form terrorism and traditional military challenges to shame. It is a threat not only to the security and prosperity to the United States, but potentially to the continued existence of life on this planet.

#### Only scenario for nuclear war—no restraint

Dyer 2009

[Gwynne, MA in Military History and PhD in Middle Eastern History former @ [Senior Lecturer](file:///C:\wiki\Senior_Lecturer) in War Studies at the [Royal Military Academy Sandhurst](file:///C:\wiki\Royal_Military_Academy_Sandhurst), Climate Wars]

THIS BOOK IS AN ATTEMPT, peering through a glass darkly, to understand the politics and the strategies of the potentially apocalyptic crisis that looks set to occupy most of the twenty­first century. There are now many books available that deal with the science of climate change and some that suggest pos­sible approaches to getting the problem under control, but there are few that venture very far into the grim detail of how real countries experiencing very different and, in some cases, overwhelming pressures as global warming proceeds, are likely to respond to the changes. Yet we all know that it's mostly politics, national and international, that will decide the outcomes. Two things in particular persuaded me that it was time to write this book. One was the realization that the first and most important impact of climate change on human civiliza­tion will be an **acute** and **permanent** crisis of food supply. Eating regularly is a non-negotiable activity, and countries that cannot feed their people are **unlikely to be "reasonable"** about it. Not all of them will be in what we used to call the "Third World" -the developing countries of Asia, Africa and Latin America. The other thing that finally got the donkey's attention was a dawning awareness that, in a number of the great pow­ers, climate change scenarios are already playing a **large** and **increasing role** in the military planning process. Rationally, you would expect this to be the case, because each country pays its professional military establishment to identify and counter "threats" to its security, but the implications of their scenarios are still alarming. There is a probability of wars, including even **nuclear wars,** if temperatures rise two to three degrees Celsius. Once that happens, all hope of international cooperation to curb emissions and stop the warming goes out the window.

#### Scope – causes war and magnifies all impacts—biod, food security, prolif, econ

Renner 2010

[Michael, Senior researcher at Worldwatch Institute and director of the Institute's Global Security Project, Jan/Feb, “CLIMATE WARMING DEMANDS FRESH THINKING ABOUT SECURITY POLICY.”, Ebsco]

Climate change may very well be the biggest challenge our civilization has ever faced. Left unaddressed, the effects on natural systems, biodiversity, food security, and habitability will likely be calamitous and the economic penalties severe. And in the absence of increased cooperation, runaway climate change may well trigger a whole new age of conflict. We live, after all, in a world marked by profound inequalities, unresolved grievances, and tremendous disparities of power. Ruled by competitive nation-states and rootless global corporations, our planet bristles with arms of all calibers. Under such circumstances, the additional stress imposed by climate change could have tremendous repercussions for human well-being, safety, and security. Nations around the world, but particularly the weakest countries and communities, confront a multitude of pressures. Many face a debilitating combination of rising competition for resources, severe environmental breakdown, the resurgence of infectious diseases, poverty and growing wealth disparities, demographic pressures, and joblessness and livelihood insecurity. Climate change is certain to intensify many, if not all, of these challenges. More frequent and intense droughts, floods, and storms will play havoc with harvests and weaken food security. Extreme weather events, sea-level rise, and spreading disease vectors could conceivably undermine the long-term habitability of some areas. Together with reduced economic viability, the result could be escalating social discontent and large-scale involuntary population movements, severely testing national and international institutions. Possible conflict constellations revolve around resource access, natural disaster impacts, and refugee and migrant flows (see figure b

### A2 Co2 Ag

#### Benefits are short-term – can’t act as a sufficient negative feedback and warming kills other resources needed to sustain agriculture.

Mann 4 Michael E, PHD in Geology and Geophysics from Yale, member of the Penn State University faculty, holding joint positions in the Departments of Meteorology and Geosciences, and the Earth and Environmental Systems Institute (EESI). He is also director of the Penn State Earth System Science Center (ESSC), "CO2 Fertilization," <http://www.realclimate.org/index.php/archives/2004/11/co_2-fertilization/>

**It has** sometimes **been argued** that the **earth’s biosphere** (in large part, the terrestrial biosphere) may **have the capacity to sequestor** much of the increased carbon dioxide (**CO2**) in the atmosphere associated with human fossil fuel burning. **This** effect **is known as “CO2 fertilization**” because, in the envisioned scenario, higher ambient CO2 concentrations in the atmosphere literally “fertilize” plant growth. Because plants in turn, in the process of photosynthesis, convert CO2 into oxygen, it is thus sometimes argued that such “co2 fertilization” could potentially provide a strong negative feedback on changing CO2 concentrations. **Recent experiments and model calculations**, however, **suggest** that **this is unlikely** to be the case. A set of controlled experiments known as FACE (“Free Air CO2 Enrichment”) **experiments have been performed in which ambient CO2 levels are elevated in forest stands and changes in various measures of productivity are made over several years**. Experiments of this sort that have been done at Duke Forest indicate (in agreement with models), that **any** elevation of **productivity is likely to be short-lived and is unlikely to significantly offset any gradual, long-term increases in co2 due to human activity. This is due in part to the fact that other conditions** (e.g. availability of nutrients such as Nitrogen and Phosphorus) **appear to quickly become limiting, even when carbon availability is removed as a constraint on plant growth when ambient CO2 concentrations are sufficiently increased**. A few simple calculations indicate that any hypothesized co2 fertilization response is unlikely to offset a significant fraction of projected increases in atmospheric co2 concentration over the next century. At present, **about 600 billion tons of carbon are tied up in the above-ground vegetation. About 2-3 times this much is tied up in roots and below ground carbon, which is a more difficult carbon pool to augment. By comparison, scenarios for fossil fuel emissions for the 21st century range** from about 600 billion tons (if we can keep total global emissions at current levels) **to over 2500 billion tons** if the world increases its reliance on combustion of coal as economic growth and population increase dramatically. **These numbers** clearly **indicate** that **sequestering** a significant fraction of projected emissions in vegetation **is likely to be very difficult**, especially as forests are cleared to make way for agriculture and communities. While there are possibilities of storage in wells and deep in the ocean, **stabilizing the atmospheric CO2 concentration would require gathering up the equivalent of 1 to 2 times the world’s existing above ground vegetation and putting it down abandoned oil wells or deep in the ocean**. While CO2 fertilization could help to increase above ground vegetation a bit, storing more than a few tens of percent of the existing carbon would be quite surprising, and this is likely to be more like a few percent of global carbon emissions projected for the 21st century.

#### CO2 is net worse for food.

Gillis 11 Justin Gillis June 4, 2011 is an assistant business editor at The New York Times, in charge of the paper's coverage of food, agriculture and energy. He joined the Times last year after a dozen years as an editor and reporter at The Washington Post, and before that, a dozen years at The Miami Herald. A Warming Planet Struggles to Feed Itself <http://www.nytimes.com/2011/06/05/science/earth/05harvest.html?pagewanted=1&_r=1>

Now, **the latest scientific research suggests that a** previously discounted **factor is helping to destabilize the food system:** [climate change](http://topics.nytimes.com/top/news/science/topics/globalwarming/index.html?inline=nyt-classifier)**. Many** of the **failed harvests of the past decade were a consequence of weather disasters**, like floods in the United States, drought in Australia and blistering heat waves in Europe and Russia. **Scientists believe some**, though not all, of those **events were caused or worsened by human-induced global warming. Temperatures are rising rapidly during the growing season in some of the most important agricultural countries**, and a paper published several weeks ago found that this had shaved several percentage points off potential yields, adding to the price gyrations. For nearly two decades, **scientists had predicted that climate change would be relatively manageable for agriculture,** suggesting that even under worst-case assumptions, it would probably take until 2080 for [**food prices**](http://topics.nytimes.com/top/reference/timestopics/subjects/f/food_prices/index.html?inline=nyt-classifier) to double. In part, **they** **were counting on** a counterintuitive ace in the hole: that **rising carbon dioxide levels**, the primary contributor to global warming, **would act as a powerful plant fertilizer and offset many of the ill effects of climate change**. Until a few years ago, these assumptions went largely unchallenged. But lately, **the destabilization of the food system and the soaring prices have rattled many leading scientists**. “The success of agriculture has been astounding,” said [Cynthia Rosenzweig](http://www.giss.nasa.gov/staff/crosenzweig.html), a researcher at NASA who helped pioneer the study of climate change and agriculture. “But I think **there’s starting to be premonitions that it may not continue forever**.” A scramble is on to figure out whether climate science has been too sanguine about the risks. **Some researchers**, analyzing computer forecasts that are used to advise governments on future crop prospects, are **point**ing **out** what they consider to be **gaping holes. These include a failure to consider the effects of extreme weather**, like the floods and the heat waves that are increasing as the earth warms. A rising unease about the future of the world’s food supply came through during interviews this year with more than 50 agricultural experts working in nine countries. These experts say **that in coming decades, farmers need to withstand whatever climate shocks come their way while roughly doubling the amount of food they produce to meet rising demand. And they need to do it while reducing the considerable environmental damage caused by the business of agriculture.**

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#### Warming kills crops more

**NRC 11**, National Research Council, Committee on Stabilization Targets for Atmospheric Greenhouse Gas Concentrations; National Research Council [“Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia,” April, the National Academies Press]

The impacts of rainfall changes can also be important at local and regional scales, although at broad scales the modeled impacts are most often dictated by temperature and CO2 because simulated rainfall changes are relatively small (Lobell and Burke, 2008). In addition, although the studies summarized in Figure 5.1 consider several of the main processes that determine yield response to weather, several other processes have not been adequately quantified. These include responses of weeds, insects, and pathogens; changes in water resources available for irrigation; effects of changes in surface ozone levels; effects of increased flood frequencies; and responses to extremely high temperatures. Moreover, most crop modeling studies have not considered changes in sustained droughts, which are likely to increase in many regions (Wang, 2005; Sheffield and Wood, 2008), or potential changes in year-to-year variability of yields. The net effect of these and other factors remains an elusive goal, but these are likely to push yields in a negative direction. For example, recent observations have shown that kudzu (Pueraria lobata), an invasive weed favored by high CO2 and warm winters, has expanded over the past few decades into the Midwest Corn Belt (Ziska et al., 2010).

#### Prefer our turns – Studies prove that co2 helps to a certain degree until it becomes detrimental

**NRC 11**, National Research Council, Committee on Stabilization Targets for Atmospheric Greenhouse Gas Concentrations; National Research Council [“Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia,” April, the National Academies Press]

Even in the most highly mechanized agricultural systems, food production is very dependent on weather. Concern about the potential impacts of climate change on food production, and associated effects on food prices and hunger, have existed since the earliest days of climate change research. Although there is still much to learn, several important findings have emerged from more than three decades of research. It is clear, for example, that higher CO2 levels are beneficial for many crop and forage yields, for two reasons. In species with a C3 photosynthetic pathway, including rice and wheat, higher CO2 directly stimulates photosynthetic rates, although this mechanism does not affect C4 crops like maize. Secondly, higher CO2 allows leaf pores, called stomata, to shrink, which results in reduced water stress for all crops. The net effect on yields for C3 crops has been measured as an average increase of 14% for 580 ppm relative to 370 ppm (Ainsworth et al., 2008). For C4 species such as maize and sorghum, very few experiments have been conducted but the observed effect is much smaller and often statistically insignificant (Leakey, 2009). Rivaling the direct CO2 effects are the impacts of climate changes caused by CO2, in particular changes in air temperature and available soil moisture. Many mechanisms of temperature response have been identified, with the relative importance of different mechanisms varying by location, season, and crop. Among the most critical responses are that crops develop more quickly under warmer temperatures, leading to shorter growing periods and lower yields, and that higher temperatures drive faster evaporation of water from soils and transpiration of water from crops. Exposure to extremely high temperatures (e.g., > 35ºC) can also cause damage in photosynthetic, reproductive, and other cells, and recent evidence suggests that even short exposures to high temperatures can be crucial for final yield (Schlenker and Roberts, 2009; Wassmann et al., 2009).A wide variety of approaches have been used in an attempt to quantify yield losses for different climate scenarios. Some models represent individual processes in detail, while others rely on statistical models that, in theory, should capture all relevant processes that have influenced historical variations in crop production. Figure 5.1 shows model estimates of the combined effect of warming and CO2 on yields for different levels of global temperature rise. It is noteworthy that although yields respond nonlinearly to temperature on a daily time scale, with extremely hot days or cold nights weighing heavily in final yields, the simulated response to seasonal warming is fairly linear at broad scales (Lobell and Field, 2007; Schlenker and Roberts, 2009). Several major crops and regions reveal consistently negative temperature sensitivities, with between 5-10% yield loss per degree warming estimated both by process-based and statistical approaches. Most of the nonlinearity in Figure 5.1 reflects the fact that CO2 benefits for yield saturate at higher CO2 levels. For C3 crops, the negative effects of warming are often balanced by positive CO2 effects up to 2-3ºC local warming in temperate regions, after which negative warming effects dominate. Because temperate land areas will warm faster than the global average (see Section 4.2), this corresponds to roughly 1.25-2ºC in global average temperature. For C4 crops, even modest amounts of warming are detrimental in major growing regions given the small response to CO2 (see Box 5.1 for discussion of maize in the United States). The expected impacts illustrated in Figure 5.1 are useful as a measure of the likely direction and magnitude of average yield changes, but fall short of a complete risk analysis, which would, for instance, estimate the chance of exceeding critical thresholds. The existing literature identifies several prominent sources of uncertainty, including those related to the magnitude of local warming per degree global temperature increase, the sensitivity of crop yields to temperature, the CO2 levels corresponding to each temperature level (see Section 3.2), and the magnitude of CO2 fertilization.

#### Co2 increases soil uptake which depletes the soil –hampers growth

**Korner et al. 7 –** Christian Korner professor of botany at University Basel, Jack Morgan, plant physiologist at USDA and faculty member in the Crops and Soils Department at Colorado State University, and Richard Norby, researcher in the Environmental Sciences Division at the Oak Ridge National Laboratory (“Terrestrial Ecosystems In A Changing World”, Chapter Two: CO2 Fertilization: When, Where, How Much? p. 9-10, Google Books)

It is obvious that these carbon investments also depend on resources other than CO2, in particular mineral nutrients. A common effect of short-term plant exposure to elevated CO2 is a reduced consumption of nutrients, but also water, per unit of biomass produced (Drake et al. 1997) or a constant consumption at greater biomass per unit land area (Niklaus and Körner 2004). In cases where total nutrient uptake is increased under elevated CO2 (Finzi et al. 2002) this will deplete soil resources in the long run. In cases where tissue nutrient concentrations are depleted, this will induce **cascades of negative ecosystem level feedbacks**, which eventually may also cause initial rates of carbon gain to diminish. In many cases, it became questionable whether carbon is a limiting resource at the whole plant or ecosystem level (Körner 2003a). It is worth recalling that all taxa of today’s biosphere grew and reproduced successfully with only 180–190 ppm, half the current CO2 concentration, 18 000 years before present (peak of last glaciation). Based on this reference period, current biota operate already in a double CO2 atmosphere. In addition, the observed reduction of water consumption per unit land area is likely to induce climatic feedbacks (through a drier atmosphere), not yet accounted for in experiments. Furthermore, any CO2 enrichment effect on plants will depend on their developmental stage, with younger plants more responsive than older ones (Loehle 1995). Most of the CO2-enrichment responses for woody species available to date are – for very practical reasons – for young, rapidly expanding life stages, during which carbon is more likely a limiting resource.

#### Warming kills agriculture

#### A. Drought

Pappas 7-25-2012

[Stephanie, LiveScience Senior Writer, “Ongoing Drought Hits Crops Hard”, http://www.livescience.com/21845-ongoing-drought-crop-prices.html]

"Global warming helps make droughts hotter and drier than they would be without human influence," said Heidi Cullen, the chief climatologist for Climate Central, a non-profit organization dedicated to communicating the science of climate change. Cullen and Stanford University food security expert David Lobell spoke to the media on Wednesday about the effect of the current drought on agriculture. The price of corn has risen by 50 percent, to $8 a bushel, from where it was last month. And a U.S. Department of Agriculture report released today suggests that consumers can expect to see the price of meat and dairy products rise as feed for livestock becomes more expensive. "It's not really going to affect the price of a loaf of bread or a corn muffin directly, but it will affect the price of meat," Lobell said. "The real impact you see is in the countries where they really rely on raw corn and wheat for a larger part of their diet." Drought worldwide Sixty-three percent of the area of the lower 48 U.S. states is in moderate to exceptional drought, Cullen said, but the weather and agriculture story is really a global one. Low rainfall in Australia, a late, weak monsoon in India, heat waves in Europe and a La Niña drought in Brazil have all impacted growing seasons, she said. U.S. agriculture is important globally, because America produces much of the world's grain. According to the Environmental Protection Agency, the United States produced 10 billion of the world's 23 billion bushels of corn in 2000. The U.S. produces 13 percent of the world's wheat and more than 50 percent of its soybeans. A combination of factors has led to what climatologists and meteorologists call a "flash drought" in much of the United States, including the agricultural center of the Corn Belt, Cullen said. [Worst Droughts in U.S. History] La Niña, a climate pattern that pushes storm tracks north, set up this southern drought with dry conditions, Cullen said. Oppressively hot conditions in June and July followed, breaking records and sealing the deal for drought. "Large portions of the Corn Belt need at least a foot of rain to effectively end the drought," Cullen said. Drought and food security To make matters worse, the drought hits at a time of tight demand worldwide, Lobell said. The last major drought in 1988 didn't affect food prices very much, he said. But now, with ethanol production eating up 40 percent of U.S. corn and demand for meat growing worldwide, the market is tight. The United States has been spared much of the heat seen in Europe and Russia in recent years, but this year could mark the end of that good luck. Droughts happen naturally, Cullen said, but climate change increases their likelihood, and exacerbates their severity. Climate models suggest that a warming world will bring more drought to the Mediterranean, central North America, the U.S. Southwest and southern Africa, she said.

#### B. Temperature

Hatfield 2011

[J.L. Hatfield, Laboratory Director, National Laboratory for Agriculture and the Environment; K.J. Boote, Agronomy Department, University of Florida; B.A. Kimball, USDA-ARS, U.S. Arid-Land Agricultural Research Center; L.H. Ziska, USDA Crop Systems and Global Change Laboratory; R.C. Izaurralde, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; D.R. Ort, USDA/ARS, Photosynthesis Research Unit, University of Illinois; A. M. Thomson, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; David W. Wolfe, Department of Horticulture, Cornell University, 2011, “Climate Impacts on Agriculture: Implications for Crop Production,” Agronomy Journal, Volume 103, Issue 2]

Crop species respond differently to temperature throughout their life cycles. Each species has a defined range of maximum and minimum temperatures within which growth occurs and an opti- mum temperature at which plant growth progresses at its fastest rate (Table 2). Growth rates slow as temperature increases above the optimum and cease when plants are exposed to their maximum (ceiling) temperature. Vegetative development (node and leaf appearance rate) hastens as temperatures increase up to the species optimum temperature. Vegetative development usually has a higher optimum temperature than reproductive development. Progression of a crop through phenological phases is accelerated by increasing temperatures up to the species-dependent optimum temperature. There are differences among annual (nonperennial) crop species in their cardinal temperature values as shown in Table 2. Values reported in Table 2 represent conditions in which temperature is the only limiting variable. It is important to realize that plant temperatures can be quite different than air temperatures and can be warmer than air under water stressed conditions or cooler than air under adequate soil water conditions. A recent review by Hatfield et al. (2004) provides a summary of the current use of plant temperatures to quantify water stress in plants. Plant temperatures are measured with either attached thermometers to the leaf that are difficult to maintain or with relatively expensive infrared thermometers, and therefore plant temperatures have been observed much less often than air temperatures. Consequently, evaluations of plant responses to changes in temperature have been focused on air temperature rather than plant or canopy temperatures, including the values given in Table 2. Exposure to higher temperatures causes faster development in nonperennial crops, which does not translate into an optimum for maximum production because the shorter life cycle means smaller plants, a shortened reproductive phase duration, and reduced yield potential because of reduced cumulative light interception during the growing season. Observations across species have shown optimum temperatures for yield are generally lower than the optimum temperature for leaf appearance rate, vegetative growth, or reproductive progression (Table 2). Yield may be impacted when temperatures fall below or above specific thresholds at critical times during development. The duration of the crop life cycle is determined by temperature and the location of specific cultivars to given production zones is a reflection of their specific temperature response. Another factor that has a major role in life cycle progression in many crops, especially for soybean, is the daylength sensitivity. One of the critical phenological stages for high temperature impacts is the reproductive stage because of the effect on pollen viability, fertilization, and grain or fruit formation. Yield potential will be affected by chronic exposures to high temperatures during the pollination stage of initial grain or fruit set. Temperature extremes during the reproductive stage of development can produce some of the largest impacts on crop production. Schlenker and Roberts (2009) have emphasized the importance of considering the nonlinearity of temperature effects on yield (the slope of the decline in yields above the optimum temperature is often steeper than the incline below it) in projecting climate change impacts. Temperature effects on individual species are discussed in the following section.

#### These factors outweigh CO2 benefits

Hatfield 2011

[J.L. Hatfield, Laboratory Director, National Laboratory for Agriculture and the Environment; K.J. Boote, Agronomy Department, University of Florida; B.A. Kimball, USDA-ARS, U.S. Arid-Land Agricultural Research Center; L.H. Ziska, USDA Crop Systems and Global Change Laboratory; R.C. Izaurralde, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; D.R. Ort, USDA/ARS, Photosynthesis Research Unit, University of Illinois; A. M. Thomson, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; David W. Wolfe, Department of Horticulture, Cornell University, 2011, “Climate Impacts on Agriculture: Implications for Crop Production,” Agronomy Journal, Volume 103, Issue 2]

Climate change, either as increasing trends in temperature, CO2, precipitation (decreasing as well as increasing), and/or O3, will have impacts on agricultural systems. Production of annual and perennial crops will be affected by changes in the absolute values of these climatic variables and/or increased variation. Episodic temperature changes exceeding the thresholds during the pollination stage of development could be quite damaging to crop production because of the sensitivity of crop plants to temperature extremes during this growth stage. These changes coupled with variable precipitation that places the plant under conditions of water stress would exacerbate the temperature effects. Warmer temperatures during the night, especially during the reproductive period, will reduce fruit or grain size because the rapid rate of development and increased respiration rates. A recent analysis by Ko et al. (2010), using the CERES–Wheat 4.0 module in the RZWQM2 model, evaluated the interactions of increasing CO2 obtained from a FACE experiment along with temperature, water, and N. They found the effects of water and N were greater than CO2 effects on biomass and yield and that temperature effects offset the CO2 effects. These results further confirm the concept that there are counterbalancing effects from different cli- mate variables and that development of adaptation or mitigation strategies will have to account for the combined effects of climate variables on crop growth, development, and yield. In an effort to examine potential solutions to low yields in sub-Saharan Africa, Laux et al. (2010) evaluated planting dates under climate change scenarios to evaluate the effect of increasing CO2 and higher temperature on groundnut (peanut) and maize. They found the positive effect of CO2 would offset the temperature response in the next 10 to 20 yr but would be overcome by higher temperatures by 2080. Changing planting dates were beneficial for the driest locations because of the more effective use of precipitation and avoidance of high temperature stresses. Both of these types of analyses will have to be conducted to evaluate potential adapta- tion strategies for all cropping regions. Increases in CO2 concentrations offer positive impacts to plant growth and increased WUE. However, these positive impacts may not fully mitigate crop losses associated with heat stress, increases in evaporative demand, and/or decreases in water availability in some regions. The episodic variation in extremes may become the larger impact on plant growth and yield. To counteract these effects will require management systems that offer the largest degree of resilience to climatic stresses as possible. This will include the development of man- agement systems for rainfed environments that can store the maximum amount of water in the soil profile and reduce water stress on the plant during critical growth periods.

#### Other limiting factors prevent yield increases – nutrients, fisheries, pollination

Whitesell 2011

[William, Director of Policy Research at the Center for Clean Air Policy in Washington, DC, “Climate Policy Foundations: Science and Economics with Lessons from Monetary Regulation”, p. 97]

In many regions, however, water and nutrients are the limiting factors for plant growth, not CO2 and temperature. In areas where climate change lowers the rate of precipitation or reduces the availability of melted snow from mountains in critical growing seasons, crop yields will fall. In addition, too much warmth can retard the growth of plants. As noted earlier, photosynthesis is impared at temperatures above 35C (95F) and shuts down completely above 40C (Brown, 2008). At such temperatures, the key staple food crops, corn and rice, lose the ability to develop pollen. To some extend farmers may be able to alleviate such effects by switching crops and altering the times for planting and harvesting. The IPCC (2007) judged that yields would generally rise with a warming of 1C to3C, except in tropical areas. For a temperature increase of more than 3C above the 1980-1999 global average of 14.25C, however, agricultural output would generally fall, even in some high-latitude regions. Food supplies could also be impaired by lower yields from fishing. Marine life will be harmed, not only by rising temperatures, but also by a relative increase in acidity because of the ocean’s absorption of CO2, as discussed later. Finally, if the overturning circulation of the ocean slows, the reduced upwelling would mean fewer nutrients brought to the surface and therefore lower productivity for the world’s fisheries.

#### CO2 emissions independently cause extinction

Romm 3-2-2012

[Joe, is a Fellow at American Progress and is the editor of Climate Progress, “Science: Ocean Acidifying So Fast It Threatens Humanity’s Ability to Feed Itself,” http://thinkprogress.org/romm/2012/03/02/436193/science-ocean-acidifying-so-fast-it-threatens-humanity-ability-to-feed-itself/?utm\_source=feedburner&utm\_medium=email&utm\_campaign=Feed%3A+climateprogre]

The world’s oceans may be turning acidic faster today from human carbon emissions than they did during four major extinctions in the last 300 million years, when natural pulses of carbon sent global temperatures soaring, says a new study in Science. The study is the first of its kind to survey the geologic record for evidence of ocean acidification over this vast time period. “What we’re doing today really stands out,” said lead author Bärbel Hönisch, a paleoceanographer at Columbia University’s Lamont-Doherty Earth Observatory. “We know that life during past ocean acidification events was not wiped out—new species evolved to replace those that died off. But if industrial carbon emissions continue at the current pace, we may lose organisms we care about—coral reefs, oysters, salmon.” That’s the news release from a major 21-author Science paper, “The Geological Record of Ocean Acidification” (subs. req’d). We knew from a 2010 Nature Geoscience study that the oceans are now acidifying 10 times faster today than 55 million years ago when a mass extinction of marine species occurred. But this study looked back over 300 million and found that “the unprecedented rapidity of CO2 release currently taking place” has put marine life at risk in a frighteningly unique way: … the current rate of (mainly fossil fuel) CO2 release stands out as capable of driving a combination and magnitude of ocean geochemical changes potentially unparalleled in at least the last ~300 My of Earth history, raising the possibility that **we are entering an unknown territory** of marine ecosystem change. That is to say, it’s not just that acidifying oceans spell marine biological meltdown “by end of century” as a 2010 Geological Society study put it. We are also warming the ocean and decreasing dissolved oxygen concentration. **That is a recipe for mass extinction**. A 2009 Nature Geoscience study found that ocean dead zones “devoid of fish and seafood” are poised to expand and “remain for thousands of years.“ And remember, we just learned from a 2012 new Nature Climate Change study that carbon dioxide is “driving fish crazy” and threatening their survival. Here’s more on the new study: The oceans act like a sponge to draw down excess carbon dioxide from the air; the gas reacts with seawater to form carbonic acid, which over time is neutralized by fossil carbonate shells on the seafloor. But if CO2 goes into the oceans too quickly, it can deplete the carbonate ions that corals, mollusks and some plankton need for reef and shell-building.

#### Turn – pollution leads to ozone – tanks ag – outweighs any benefit from CO2

Monbiot 2007

[George, Professor @ Oxford Brookes University, Heat: How to Stop the Planet from Burning, pg. 7]

But now, I am sorry to say, it seems that I might have been right, though for the wrong reasons. In late 2005, a study published in the Philosophical Transactions of the Royal Society alleged that the yield predictions for temperate countries were 'over optimistic'. The authors had blown carbon dioxide and ozone, in concentrations roughly equivalent to those expected later this century, over crops in the open air. They discovered that the plants didn't respond as they were supposed to: the extra carbon dioxide did not fertilize them as much as the researchers predicted, and the ozone reduced their yields by 20 per cent." Ozone levels are rising in the rich nations by between 1 and 2 per cent a year, as a result of sunlight interacting with pollution from cars, planes and power stations. The levels happen to be highest in the places where crop yields were expected to rise: western Europe, the midwest and eastern US and eastern China. The expected ozone increase in China will cause maize, rice and soybean production to fall by over 30 per cent by 2020, These reductions in yield, if real, arc enough to cancel out the effects of both higher temperatures and higher carbon dioxide concentrations.

#### Turn – weeds – Co2 leads to weeds – tanks agriculture

Ziska 2007

[Lewis Ziska, PhD, Principal investigator at United States Department of Agriculture  
Agricultural Research Service Alternate Crop and Systems Lab. “Climate change impact on weeds” http://www.climateandfarming.org/pdfs/FactSheets/III.1Weeds.pdf]

Weeds have a greater genetic diversity than crops. Consequently, if a resource (light, water, nutrients or carbon dioxide) changes within the environment, it is more likely that weeds will show a greater growth and reproductive response. It can be argued that many weed species have the C4 photosynthetic pathway and therefore will show a smaller response to atmospheric CO2 relative to C3 crops. However, this argument does not consider the range of available C3 and C4 weeds present in any agronomic environment. That is, at present, the U.S. has a total of 46 major crops; but, over 410 “troublesome” weed species (both C3 and C4) associated with those crops (Bridges 1992). Hence, if a C4 weed species does not respond, it is likely that a C3 weed species will. In addition, many growers recognize that the worst weeds for a given crop are similar in growth habit or photosynthetic pathway; indeed, they are often the same uncultivated or “wild” species, e.g. oat and wild oat, sorghum and shattercane, rice and red rice. To date, for all weed/crop competition studies where the photosynthetic pathway is the same, weed growth is favored as CO2 is increased (Table 1, Ziska and Runion, In Press). In addition to agronomic weeds, there is an additional category of plants that are considered “noxious” or “invasive” weeds. These are plants, usually non-native whose introduction results in wide-spread economic or environmental consequences (e.g. kudzu). Many of these weeds reproduce by vegetative means (roots, stolons, etc.) and recent evidence indicates that as a group, these weeds may show a strong response to recent increases in atmospheric CO2 (Ziska and George 2004). How rising CO2 would contribute to the success of these weeds in situ however, is still unclear. Overall, the data that are available on the response of weeds and changes in weed ecology are limited. Additional details, particularly with respect to interactions with other environmental variables (e.g. nutrient availability, precipitation and temperature) are also needed.

### A2 Not SV

#### Climate change means mass death – getting worse over time

**Larry West writes:** West, Larry [Contributor, Environmental Issues] “Global Warming leads to 150,000 Deaths a Year”

**Global warming** is not only a threat to our future health, it **already contributes to more than 150,000 deaths and 5 million illnesses annually**, according to a team of health and climate scientists at the World Health Organization and the University of Wisconsin at Madison—**and those numbers could** double by 2030. Research data published in the journal *Nature* show that [**G]lobal warming may** affect human health in a surprising number of ways: **speed**ing **the spread of infectious diseases such as malaria and dengue fever; creating conditions that lead to potentially fatal** [**malnutrition**](http://environment.about.com/od/healthenvironment/a/malnutrition.htm) and diarrhea; and increasing the likelihood of [heat waves](http://environment.about.com/od/healthenvironment/a/air_quality_hea.htm) and floods. Health Effects of Global Warming Hardest on Poor Nations According to the scientists, who have mapped the growing health impacts of global warming, the data show that global warming affects different regions in very different ways. [**Global warming**](http://environment.about.com/od/faqglobalwarming/f/globalwarming.htm) **is particularly hard on people in poor countries,** which is ironic, because the places that have contributed the least to global warming are most vulnerable to the death and disease higher temperatures can bring. "**Those least able to cope and least responsible for the greenhouse gases that cause global warming are most affected**," said lead author Jonathan Patz, a professor at UW-Madison's Gaylord Nelson Institute for Environmental Studies. "Herein lies an enormous global ethical challenge." Global Regions at Highest Risk from Global Warming According to the *Nature* report, regions at highest risk for enduring the health effects of climate change include coastlines along the Pacific and Indian oceans and sub-Saharan Africa. Large sprawling cities, with their [urban "heat island" effect](http://environment.about.com/od/globalwarmingandweather/a/heat_islands.htm?terms=heat+islands), are also prone to temperature-related health problems. Africa has some of the lowest per-capita emissions of [greenhouse gases](http://environment.about.com/od/faqglobalwarming/f/greengases.htm). Yet, regions of the continent are gravely at risk for diseases related to global warming. "Many of the most important diseases in poor countries, from malaria to diarrhea and malnutrition, are highly sensitive to climate," said co-author Diarmid Campbell-Lendrum of WHO. "The health sector is already struggling to control these diseases and climate change threatens to undermine these efforts." "Recent extreme climatic events have underscored the risks to human health and survival," added Tony McMichael, director of the National Centre for Epidemiology and Population Health at the Australian National University. "This synthesizing paper points the way to strategic research that better assesses the risks to health from global climate change."

### A2 It’s Fake

#### Warming is real – all factors confirm

Muller 7-28-2012

[Richard, professor of physics at the University of California, Berkeley, and a former MacArthur Foundation fellow, “The Conversion of a Climate-Change Skeptic”, <http://www.nytimes.com/2012/07/30/opinion/the-conversion-of-a-climate-change-skeptic.html?pagewanted=all>, HM]

CALL me a converted skeptic. Three years ago I identified problems in previous climate studies that, in my mind, threw doubt on the very existence of global warming. Last year, following an intensive research effort involving a dozen scientists, I concluded that global warming was real and that the prior estimates of the rate of warming were correct. I’m now going a step further: Humans are almost entirely the cause. My total turnaround, in such a short time, is the result of careful and objective analysis by the Berkeley Earth Surface Temperature project, which I founded with my daughter Elizabeth. Our results show that the average temperature of the earth’s land has risen by two and a half degrees Fahrenheit over the past 250 years, including an increase of one and a half degrees over the most recent 50 years. Moreover, it appears likely that essentially all of this increase results from the human emission of greenhouse gases. These findings are stronger than those of the Intergovernmental Panel on Climate Change [IPCC], the United Nations group that defines the scientific and diplomatic consensus on global warming. In its 2007 report, the I.P.C.C. concluded only that most of the warming of the prior 50 years could be attributed to humans. It was possible, according to the I.P.C.C. consensus statement, that the warming before 1956 could be because of changes in solar activity, and that even a substantial part of the more recent warming could be natural. Our Berkeley Earth approach used sophisticated statistical methods developed largely by our lead scientist, Robert Rohde, which allowed us to determine earth land temperature much further back in time. We carefully studied issues raised by skeptics: biases from urban heating (we duplicated our results using rural data alone), from data selection (prior groups selected fewer than 20 percent of the available temperature stations; we used virtually 100 percent), from poor station quality (we separately analyzed good stations and poor ones) and from human intervention and data adjustment (our work is completely automated and hands-off). In our papers we demonstrate that none of these potentially troublesome effects unduly biased our conclusions. The historic temperature pattern we observed has abrupt dips that match the emissions of known explosive volcanic eruptions; the particulates from such events reflect sunlight, make for beautiful sunsets and cool the earth’s surface for a few years. There are small, rapid variations attributable to El Niño and other ocean currents such as the Gulf Stream; because of such oscillations, the “flattening” of the recent temperature rise that some people claim is not, in our view, statistically significant. What has caused the gradual but systematic rise of two and a half degrees? We tried fitting the shape to simple math functions (exponentials, polynomials), to solar activity and even to rising functions like world population. By far the best match was to the record of atmospheric carbon dioxide (CO2), measured from atmospheric samples and air trapped in polar ice.

#### Scientific consensus is on our side

Lewandowsky and Ashley 2011

[Stephan Lewandowsky, Professor of Cognitive Studies at the University of Western Australia, and Michael Ashley, Professor of Astrophysics at the University of New South Wales, June 24, 2011, “The false, the confused and the mendacious: how the media gets it wrong on climate change,” <http://goo.gl/u3nOC>, HM]

But despite these complexities, some aspects of climate science are thoroughly settled. We know that atmospheric CO2 is increasing due to humans. We know that this CO2, while being just a small fraction of the atmosphere, has an important influence on temperature. We can calculate the effect, and predict what is going to happen to the earth’s climate during our lifetimes, all based on fundamental physics that is as certain as gravity. The consensus opinion of the world’s climate scientists is that climate change is occurring due to human CO2 emissions. The changes are rapid and significant, and the implications for our civilisation may be dire. The chance of these statements being wrong is vanishingly small. Scepticism and denialism Some people will be understandably sceptical about that last statement. But when they read up on the science, and have their questions answered by climate scientists, they come around. These people are true sceptics, and a degree of scepticism is healthy. Other people will disagree with the scientific consensus on climate change, and will challenge the science on internet blogs and opinion pieces in the media, but no matter how many times they are shown to be wrong, they will never change their opinions. These people are deniers. The recent articles in The Conversation have put the deniers under the microscope. Some readers have asked us in the comments to address the scientific questions that the deniers bring up. This has been done. Not once. Not twice. Not ten times. Probably more like 100 or a 1000 times. Denier arguments have been dealt with by scientists, again and again and again. But like zombies, the deniers keep coming back with the same long-falsified and nonsensical arguments. The deniers have seemingly endless enthusiasm to post on blogs, write letters to editors, write opinion pieces for newspapers, and even publish books. What they rarely do is write coherent scientific papers on their theories and submit them to scientific journals. The few published papers that have been sceptical about climate change have not withstood the test of time. The phony debate on climate change So if the evidence is this strong, why is there resistance to action on climate change in Australia? At least two reasons can be cited. First, as The Conversation has revealed, there are a handful of individuals and organisations who, by avoiding peer review, have engineered a phony public debate about the science, when in fact that debate is absent from the one arena where our scientific knowledge is formed. These individuals and organisations have so far largely escaped accountability. But their free ride has come to an end, as the next few weeks on The Conversation will continue to show. The second reason, alas, involves systemic failures by the media. Systemic media failures arise from several presumptions about the way science works, which range from being utterly false to dangerously ill-informed to overtly malicious and mendacious. The false Let’s begin with what is merely false. A tacit presumption of many in the media and the public is that climate science is a brittle house of cards that can be brought down by a single new finding or the discovery of a single error. Nothing could be further from the truth. Climate science is a cumulative enterprise built upon hundreds of years of research. The heat-trapping properties of CO₂ were discovered in the middle of the 19th century, pre-dating even Sherlock Holmes and Queen Victoria.

### A2 Food

#### Even a small rise in global temperature would lead to mass starvation despite CO2 fertilization resulting in extinction

Robert Strom, Professor Emeritus of planetary sciences in the Department of Planetary Sciences at the University of Arizona, 2007(studied climate change for 15 years, the former Director of the Space Imagery Center, a NASA Regional Planetary Image Facility, “Hot House”, SpringerLink, p. 211-216)

THE future consequences of global warming are the least known aspect of the problem. They are based on highly complex computer models that rely on inputs that are sometimes not well known or factors that may be completely unforeseen. Most models assume certain scenarios concerning the rise in greenhouse gases. Some assume that we continue to release them at the current rate of increase while others assume that we curtail greenhouse gas release to one degree or another. Furthermore, we are in completely unknown territory. The current greenhouse gas content of the atmosphere has not been as high in at least the past 650,000 years, and the rise in temperature has not been as rapid since civilization began some 10,000 years ago. What lies ahead for us is not completely understood, but it certainly will not be good, and it could be catastrophic. We know that relatively minor climatic events have had strong adverse effects on humanity, and some of these were mentioned in previous chapters. A recent example is the strong El Nin~o event of 1997-1998 that caused weather damage around the world totaling $100 billion: major flooding events in China, massive fires in Borneo and the Amazon jungle, and extreme drought in Mexico and Central America. That event was nothing compared to what lies in store for us in the future if we do nothing to curb global warming. We currently face the greatest threat to humanity since civilization began. This is the crucial, central question, but it is very difficult to answer (Mastrandea and Schneider, 2004). An even more important question is: "At what temperature and environmental conditions is a threshold crossed that leads to an abrupt and catastrophic climate change?'' It is not possible to answer that question now, but we must be aware that in our ignorance it could happen in the not too distant future. At least the question of a critical temperature is possible to estimate from studies in the current science literature. This has been done by the Potsdam Institute for Climate Impact Research, Germany's leading climate change research institute (Hare, 2005). According to this study, global warming impacts multiply and accelerate rapidly as the average global temperature rises. We are certainly beginning to see that now. According to the study, as the average global temperature anomaly rises to 1 °C within the next 25 years (it is already 0.6'C in the Northern Hemisphere), some specialized ecosystems become very stressed, and in some developing countries food production will begin a serious decline, water shortage problems will worsen, and there will be net losses in the gross domestic product (GDP). At least one study finds that because of the time lags between changes in radiative forcing we are in for a 1 °C increase before equilibrating even if the radiative forcing is fixed at today's level (Wetherald et al., 2001). It is apparently when the temperature anomaly reaches 2 °C that serious effects will start to come rapidly and with brute force (International Climate Change Taskforce, 2005). At the current rate of increase this is expected to happen sometime in the middle of this century. At that point there is nothing to do but try to adapt to the changes. Besides the loss of animal and plant species and the rapid exacerbation of our present problems, there are likely to be large numbers of hungry, diseased and starving people, and at least 1.5 billion people facing severe water shortages. GDP losses will be significant and the spread of diseases will be widespread (see below). We are only about 30 years away from the 440 ppm CO2 level where the eventual 2'C global average temperature is probable. When the temperature reaches 3 'C above today's level, the effects appear to become absolutely critical. At the current rate of greenhouse gas emission, that point is expected to be reached in the second half of the century. For example, it is expected that the Amazon rainforest will become irreversibly damaged leading to its collapse, and that the complete destruction of coral reefs will be widespread. As these things are already happening, this picture may be optimistic. As for humans, there will be widespread hunger and starvation with up to 5.5 billion people living in regions with large crop losses and another 3 billion people with serious water shortages. If the Amazon rainforest collapses due to severe drought it would result in decreased uptake of CO2 from the soil and vegetation of about 270 billion tons, resulting in an enormous increase in the atmospheric level of CO2. This, of course, would lead to even hotter temperatures with catastrophic results for civilization. A Regional Climate Change Index has been established that estimates the impact of global warming on various regions of the world (Giorgi, 2006). The index is based on four variables that include changes in surface temperature and precipitation in 2080-2099 compared to the period 1960-1979. **All regions of the world are affected** significantly, but some regions are much more vulnerable than others. The biggest impacts occur in the Mediterranean and northeastern European regions, followed by high-latitude Northern Hemisphere regions and Central America. Central America is the most affected tropical region followed by southern equatorial Africa and southeast Asia. Other prominent mid-latitude regions very vulnerable to global warming are eastern North America and central Asia. It is entirely obvious that we must start curtailing greenhouse gas emissions now, not 5 or 10 or 20 years from now. Keeping the global average temperature anomaly under 2'C will not be easy according to a recent report (Scientific Expert Group Report on Climate Change, 2007). It will require a rapid worldwide reduction in methane, and global CO2 emissions must level off to a concentration not much greater than the present amount by about 2020. Emissions would then have to decline to about a third of that level by 2100. Delaying action will only insure a grim future for our children and grandchildren. If the current generation does not drastically reduce its greenhouse gas emission, then, unfortunately, our grandchildren will get what we deserve. There are three consequences that have not been discussed in previous chapters but could have devastating impacts on humans: food production, health, and the economy. In a sense, all of these topics are interrelated, because they affect each other. Food Production Agriculture is critical to the survival of civilization. Crops feed not only us but also the domestic animals we use for food. Any disruption in food production means a disruption of the economy, government, and health. The increase in CO2 will result in some growth of crops, and rising temperatures will open new areas to crop production at higher latitudes and over longer growing seasons; however, the overall result will be decreased crop production in most parts of the world. A 1993 study of the effects of a doubling of CO2 (550 ppm) above pre-industrial levels shows that there will be substantial decreases in the world food supply (Rosenzweig et al., 1993). In their research they studied the effects of global warming on four crops (wheat, rice, protein feed, and coarse grain) using four scenarios involving various adaptations of crops to temperature change and CO2 abundance. They found that the amount of world food reduction ranged from 1 to 27%. However, the optimistic value of 1% is almost certainly much too low, because it assumed that the amount of degradation would be offset by more growth from "CO2 fertilization." We now know that this is not the case, as explained below and in Chapter 7. The most probable value is a worldwide food reduction between 16 and 27%. These scenarios are based on temperature and CO2 rises that may be too low, as discussed in Chapter 7. However, even a decrease in world food production of 16% would lead to large-scale starvation in many regions of the world. Large-scale experiments called Free-Air Concentration Enrichment have shown that the effects of higher CO2 levels on crop growth is about 50% less than experiments in enclosure studies (Long et al., 2006). This shows that the projections that conclude that rising CO2 will fully offset the losses due to higher temperatures are wrong. The downside of climate change will far outweigh the benefits of increased CO2 and longer growing seasons. One researcher (Prof. Long) from the University of Illinois put it this way: Growing crops much closer to real conditions has shown that increased levels of carbon dioxide in the atmosphere will have roughly half the beneficial effects previously hoped for in the event of climate change. In addition, ground-level ozone, which is also predicted to rise but has not been extensively studied before, has been shown to result in a loss of photosynthesis and 20 per cent reduction in crop yield. Both these results show that we need to seriously re-examine our predictions for future global food production, as they are likely to be far lower than previously estimated. Also, studies in Britain and Denmark show that only a few days of hot temperatures can severely reduce the yield of major food crops such as wheat, soy beans, rice, and groundnuts if they coincide with the flowering of these crops. This suggests that there are certain thresholds above which crops become very vulnerable to climate change. The European heat wave in the summer of 2003 provided a large-scale experiment on the behavior of crops to increased temperatures. Scientists from several European research institutes and universities found that the growth of plants during the heat wave was reduced by nearly a third (Ciais et al., 2005). In Italy, the growth of corn dropped by about 36% while oak and pine had a growth reduction of 30%. In the affected areas of the mid- west and California the summer heat wave of 2006 resulted in a 35% loss of crops, and in California a 15% decline in dairy production due to the heat-caused death of dairy cattle. It has been projected that a 2 °C rise in local temperature will result in a $92 million loss to agriculture in the Yakima Valley of Washington due to the reduction of the snow pack. A 4'C increase will result in a loss of about $163 million. For the first time, the world's grain harvests have fallen below the consumption level for the past four years according to the Earth Policy Institute (Brown, 2003). Furthermore, the shortfall in grain production increased each year, from 16 million tons in 2000 to 93 million tons in 2003. These studies were done in industrialized nations where agricultural practices are the best in the world. In developing nations the impact will be much more severe. It is here that the impact of global warming on crops and domestic animals will be most felt. In general, the world's most crucial staple food crops could fall by as much as one-third because of resistance to flowering and setting of seeds due to rising temperatures. Crop ecologists believe that many crops grown in the tropics are **near, or** at, their thermal limits**. Already** research **in the Philippines** has linked higher night-time temperatures to a reduction in rice yield. It is estimated that for rice, wheat, and corn, the grain yields are likely to decline by 10% for every local 1 °C increase in temperature. With a decreasing availability of food, malnutrition will become more frequent accompanied by damage to the immune system. This will result in a greater susceptibility to spreading diseases. For an extreme rise in global temperature (> 6 'C), it is likely that worldwide crop failures will lead to mass starvation, and political and economic chaos with all their ramifications for civilization.

### A2 Oceans

**Unchecked C02 levels acidifies the oceans – kills all marine life**

**Koebler 8/1**/12 – science and technology reporter for U.S. News & World Report (Jason, “NOAA: Oceans' Reefs at Risk From Carbon Emissions”, http://www.usnews.com/news/articles/2012/08/01/noaa-oceans-reefs-at-risk-from-carbon-emissions, CMR)

Not all carbon emissions find their way into Earth's atmosphere—about half of it is absorbed by vegetation and the world's oceans. On the one hand, that helps limit carbon's climate-changing effects. But on the other, it can deliver what a National Oceanic and Atmospheric Administration scientist calls a "double whammy" to the oceans.¶ That's because carbon dioxide (CO2) is a weak acid, and when it's absorbed by water, it contributes to ocean acidification, which can kill **coral reefs** and **shellfish**, wreaking havoc on undersea plant and animal life.¶ As humans have increased their carbon emissions over the past 100 years, vegetation and the world's surface oceans have been working overtime to absorb about half of it, about the same proportion as 50 years ago, according to the study, published Wednesday in Nature.¶ "Humanity is getting an assist on climate change from natural systems, otherwise the carbon dioxide in the atmosphere would be twice as high," says Pieter Tans, one of the study's authors. "But CO2 is an acid and the amounts [being absorbed by the ocean] are **so massive** that I don't see how we can remedy coming acidification."¶ Reforestation in parts of North America and China and deforestation slowdowns in other parts of the world have allowed plants to bear some of the burden, but he says the ocean is working overtime to pull in more carbon than ever before.¶ But even though Earth is absorbing a similar proportion of carbon as it was 50 years ago, overall human emissions have **greatly increased**, meaning sea temperatures are rising even as they acidify. According to a Scripps Institution of Oceanography study released earlier this year, ocean temperatures have increased by about half a degree over the past 100 years; many scientists say that increase has been responsible for an increase in the **severity** and **frequency** of hurricanes.¶ "Sea temperature change comes from climate change, but they're also acidifying," Tans says. "The oceans get a double whammy."¶ While increasing carbon emissions may take longer to wreak havoc on the world's climate, it could deal a **death blow** to vulnerable coral reefs, which shelter millions of plant and animal species, Tans says.¶ "Acidification is a concern for sea life—for the atmosphere, it's a good thing our oceans are absorbing so much carbon, but as the oceans acidify, it'll affect [coral reefs and shellfish], and **work its way up the food chain**," he says. "At some point, [reefs] are endangered. We're not too far away from that."¶

**Extinction**

Kristof 6 (NICHOLAS D. KRISTOF, American journalist, author, op-ed columnist, and a winner of two Pulitzer Prizes, “Scandal Below the Surface”, Oct 31, 2006, http://select.nytimes.com/2006/10/31/opinion/31kristof.html?\_r=1, CMR)

If you think of the earth’s surface as a great beaker, then it’s filled mostly with ocean water. It is slightly alkaline, and that’s what creates a hospitable home for fish, coral reefs and plankton — and indirectly, higher up the food chain, for us. But scientists have discovered that the carbon dioxide (CO2) we’re spewing into the air doesn’t just heat up the atmosphere and lead to rising seas. Much of that carbon is absorbed by the oceans, and there it produces carbonic acid — the same stuff found in soda pop. That makes oceans a bit more acidic, impairing the ability of certain shellfish to produce shells, which, like coral reefs, are made of calcium carbonate. A recent article in Scientific American explained the indignity of being a dissolving mollusk in an acidic ocean: “Drop a piece of chalk (calcium carbonate) into a glass of vinegar (a mild acid) if you need a demonstration of the general worry: the chalk will begin dissolving immediately.” The more acidic waters may spell the end, at least in higher latitudes, of some of the tiniest variations of shellfish — certain plankton and tiny snails called pteropods. This would **disrupt the food chain,** possibly killing off many whales and fish, and rippling up all the way to humans. We stand, so to speak, on the shoulders of plankton. “There have been a couple of very big events in geological history where the carbon cycle changed dramatically,” said Scott Doney, senior scientist at the Woods Hole Oceanographic Institution in Massachusetts. One was an abrupt warming that took place 55 million years ago in conjunction with acidification of the oceans and **mass extinctions**. Most scientists don’t believe we’re headed toward a man-made variant on that episode — not **yet**, at any rate. But many worry that we’re hurtling into unknown dangers. “Whether in 20 years or 100 years, I think marine ecosystems are going to be dramatically different by the end of this century, and that’ll lead to **extinction events**,” Mr. Doney added. “This is the only habitable planet we have,” he said. “The damage we do is going to be felt by **all the generations to come.”** So that should be one of the great political issues for this century — the vandalism we’re committing to our planet because of our refusal to curb greenhouse gases. Yet the subject is barely debated in this campaign. Changes in ocean chemistry are only one among many damaging consequences of carbon emissions. Evidence is also growing about the more familiar dangers: melting glaciers, changing rainfall patterns, rising seas and more powerful hurricanes. Last year, the World Health Organization released a study indicating that climate change results in an extra 150,000 deaths and five million sicknesses each year, by causing the spread of malaria, diarrhea, malnutrition and other ailments. A report prepared for the British government and published yesterday, the Stern Review on the Economics of Climate Change, warned that inaction “could create risks of major disruption to economic and social activity, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century.” If emissions are not curbed, climate change will cut 5 percent to 20 percent of global G.D.P. each year, declared the mammoth report. “In contrast,” it said, “the costs of action — reducing greenhouse gas emissions to avoid the worst impacts of climate change — can be limited to around 1 percent of global G.D.P. each year.” Some analysts put the costs of action higher, but most agree that it makes sense to invest far more in alternative energy sources, both to wean ourselves of oil and to reduce the strain on our planet. We know what is needed: a carbon tax or cap-and-trade system, a post-Kyoto accord on emissions cutbacks, and major research on alternative energy sources. But as The Times’s Andrew Revkin noted yesterday, spending on energy research and development has fallen by more than half, after inflation, since 1979.

### A2 Past Tipping Point

#### Not too late – every reduction key

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We're not yet committed to surpassing 2°C global warming, but as Watson noted, we are quickly running out of time to realistically give ourselves a chance to stay below that 'danger limit'. However, 2°C is not a do-or-die threshold. Every bit of CO2 emissions we can reduce means that much avoided future warming, which means that much avoided climate change impacts. As Lonnie Thompson noted, the more global warming we manage to mitigate, the less adaption and suffering we will be forced to cope with in the future. Realistically, based on the current political climate (which we will explore in another post next week), limiting global warming to 2°C is probably the best we can do. However, there is a big difference between 2°C and 3°C, between 3°C and 4°C, and anything greater than 4°C can probably accurately be described as catastrophic, since various tipping points are expected to be triggered at this level. Right now, we are on track for the catastrophic consequences (widespread coral mortality, mass extinctions, hundreds of millions of people adversely impacted by droughts, floods, heat waves, etc.). But we're not stuck on that track just yet, and we need to move ourselves as far off of it as possible by reducing our greenhouse gas emissions as soon and as much as possible. There are of course many people who believe that the planet will not warm as much, or that the impacts of the associated climate change will be as bad as the body of scientific evidence suggests. That is certainly a possiblity, and we very much hope that their optimistic view is correct. However, what we have presented here is the best summary of scientific evidence available, and it paints a very bleak picture if we fail to rapidly reduce our greenhouse gas emissions. If we continue forward on our current path, catastrophe is not just a possible outcome, it is the most probable outcome. And an intelligent risk management approach would involve taking steps to prevent a catastrophic scenario if it were a mere possibility, let alone the most probable outcome. This is especially true since the most important component of the solution - carbon pricing - can be implemented at a relatively low cost, and a far lower cost than trying to adapt to the climate change consequences we have discussed here (Figure 4).

#### We can avoid tipping points but action now is key

DNews 2012

(“Politics Is Key to Avoiding Global Warming Catastrophe”, <http://news.discovery.com/earth/politics-is-key-to-avoiding-global-warming-catastrophe-130103.html>, CMR)

Delaying global action on climate change by 20 more years will put the goal of keeping the world relatively cool out of reach forever, no matter how much money humanity later spends to try to solve the problem, a new study finds.¶ Since the 1990s, scientists and international negotiators have aimed to keep global temperatures from warming more than 2 degrees Celsius (3.6 degrees Fahrenheit), but little progress has been made so far in concrete steps toward that goal. The most recent climate talks, in Qatar in December, ended with only modest steps that fail to address growing greenhouse gas emissions, climate scientists said.¶ It's these delays that ultimately make dealing with climate change more expensive and perhaps eventually impossible, according to a study published this week (Jan. 4) in the journal Nature. While it's true there are still uncertainties about how the climate will respond to specific strategies, these uncertainties are nothing compared with potential disaster caused by delay, said study researcher Joeri Rogelj of Switzerland's Institute for Atmospheric and Climate Science in Zurich.¶ "The uncertainties about how the climate system will respond have been previously used as an argument to postpone action until we have learned more," Rogelj told LiveScience. "We show that such a delay strategy is unsupported and that the most important factor for staying below 2 degrees C is the timing of when we start tackling this problem at a global scale."¶ Many researchers have attempted to weigh the costs and benefits of climate-change strategies ranging from a carbon tax on emissions to requirements for sequestering carbon underground rather than releasing it into the atmosphere. What Rogelj and his colleagues did differently was to rank the importance of "the known unknowns." These are the uncertainties that keep scientists from predicting exactly how the future of climate will unravel. They include geophysical uncertainties — how the climate system of our planet will respond to specific strategies — as well as social uncertainties, such as future growth and energy demand. Technological uncertainties include what innovations will be available for lowering emissions. And finally, there are the political uncertainties: When will the world decide to act to prevent further warming? (8 Ways Global Warming Is Already Changing the World)¶ For the first time, Rogelj and his colleagues quantified and ranked the importance of each of these uncertainties. They found that politics dominated.¶ Delay hurts¶ In other words, the timing of climate-change action plays a more important role in keeping the planet from possibly catastrophic warming than social, geophysical or technological hurdles. If humanity delays in taking action, even the best-case social, geophysical and tech scenarios will do little good.¶ "When delaying action by two more decades, chances to stay below 2 degrees C become very low and we find that they cannot be improved later on, no matter how much money we throw at the problem in the future," Rogelj said.¶

### A2 Alt Causes

#### CO2 is the primary driver of climate change – outweighs all alt causes

Vertessy and Clark3-13**-**2012[Rob, Acting Director of Australian Bureau of Meteorology, and Megan, Chief Executive Officer at the Commonwealth Scientific and Industrial Research Organisation, “State of the Climate 2012”, <http://theconversation.edu.au/state-of-the-climate-2012-5831>]

Carbon dioxide (CO2) emissions account for about 60% of the effect from anthropogenic greenhouse gases on the earth’s energy balance over the past 250 years. These global CO2 emissions are mostly from fossil fuels (more than 85%), land use change, mainly associated with tropical deforestation (less than 10%), and cement production and other industrial processes (about 4%). Australia contributes about 1.3% of the global CO2 emissions. Energy generation continues to climb and is dominated by fossil fuels – suggesting emissions will grow for some time yet. CO2 levels are rising in the atmosphere and ocean. About 50% of the amount of CO2 emitted from fossil fuels, industry, and changes in land-use, stays in the atmosphere. The remainder is taken up by the ocean and land vegetation, in roughly equal parts. The extra carbon dioxide absorbed by the oceans is estimated to have caused about a 30% increase in the level of ocean acidity since pre-industrial times. The sources of the CO2 increase in the atmosphere can be identified from studies of the isotopic composition of atmospheric CO2 and from oxygen (O2) concentration trends in the atmosphere. The observed trends in the isotopic (13C, 14C) composition of CO2 in the atmosphere and the decrease in the concentration of atmospheric O2 confirm that the dominant cause of the observed CO2 increase is the combustion of fossil fuels.

#### Anthropogenic emissions massively outweigh natural emissions.

American Geophysical Union 2011

[ “Volcanic Versus Anthropogenic Carbon Dioxide,” 6/14, http://www.agu.org/pubs/pdf/2011EO240001.pdf]

The projected 2010 anthropogenic CO2 emission rate of 35 gigatons per year is 135 times greater than the 0.26-gigaton-per-year preferred estimate for volcanoes. This ratio of anthropogenic to volcanic CO2 emissions defines the anthropogenic CO2 multiplier (ACM), an index of anthropogenic CO2 ’s dominance over volcanic CO2 emissions. Figure 1 shows the ACM as a time series calculated from time series data on anthropogenic CO2 emissions and Marty and Tolstikhin’s [1998] preferred and plausible range of emission estimates for global volcanic CO2 . The ACM values related to the preferred estimate rise gradually from about 18 in 1900 to roughly 38 in 1950; thereafter they rise rapidly to approximately 135 by 2010. This pattern mimics the pattern of the anthropogenic CO2 emissions time series. It reflects the 650% growth in anthropogenic emissions since 1900, about 550% of which has occurred since 1950. ACM plots related to the preferred estimates of global volcanic CO2 in the four other studies (not shown) exhibit the same pattern but at higher values; e.g., the 2010 ACM values based on their preferred estimates range from 167 to 233, compared to the 135 based on Marty and Tolstikhin’s [1998] preferred estimate.

### A2 Natural Variability

#### Natural variability doesn’t disprove warming – hotter temperatures will continue to be more prevalent with climate change

Hansen 2012

[James, NASA Goddard Institute for Space Studies, “Climate change is here — and worse than we thought”, http://www.washingtonpost.com/opinions/climate-change-is-here--and-worse-than-we-thought/2012/08/03/6ae604c2-dd90-11e1-8e43-4a3c4375504a\_story.html]

These weather events are not simply an example of what climate change could bring. They are caused by climate change. The odds that natural variability created these extremes are minuscule, vanishingly small. To count on those odds would be like quitting your job and playing the lottery every morning to pay the bills. Twenty-four years ago, I introduced the concept of “climate dice” to help distinguish the long-term trend of climate change from the natural variability of day-to-day weather. Some summers are hot, some cool. Some winters brutal, some mild. That’s natural variability. But as the climate warms, natural variability is altered, too. In a normal climate without global warming, two sides of the die would represent cooler-than-normal weather, two sides would be normal weather, and two sides would be warmer-than-normal weather. Rolling the die again and again, or season after season, you would get an equal variation of weather over time. But loading the die with a warming climate changes the odds. You end up with only one side cooler than normal, one side average, and four sides warmer than normal. Even with climate change, you will occasionally see cooler-than-normal summers or a typically cold winter. Don’t let that fool you. Our new peer-reviewed study, published by the National Academy of Sciences, makes clear that while average global temperature has been steadily rising due to a warming climate (up about 1.5 degrees Fahrenheit in the past century), the extremes are actually becoming much more frequent and more intense worldwide. When we plotted the world’s changing temperatures on a bell curve, the extremes of unusually cool and, even more, the extremes of unusually hot are being altered so they are becoming both more common and more severe. The change is so dramatic that one face of the die must now represent extreme weather to illustrate the greater frequency of extremely hot weather events. Such events used to be exceedingly rare. Extremely hot temperatures covered about 0.1 percent to 0.2 percent of the globe in the base period of our study, from 1951 to 1980. In the last three decades, while the average temperature has slowly risen, the extremes have soared and now cover about 10 percent of the globe. This is the world we have changed, and now we have to live in it — the world that caused the 2003 heat wave in Europe that killed more than 50,000 people and the 2011 drought in Texas that caused more than $5 billion in damage. Such events, our data show, will become even more frequent and more severe.

### A2 Negative Feedback – Clouds

#### Cloud effect is net neutral – thin and thick clouds have opposite effects

Baum et. al 2012

[Seth Baum, Research on Environmental Decisions @ Columbia, Chris Karmosky, Geography @ Penn State, Jacob Haqq-Misra, Meteorology and Astrobiology Research Center, June 2012, "Climate Change: Evidence of Human Causes and Arguments for Emissions Reduction," Science and Engineering Ethics 18]

The Role of Cloud Formation Clouds do play an important role in surface air temperatures: water vapor is Earth’s most prevalent greenhouse gas, so increased cloud cover will cause surface warming. However, clouds also reﬂect incoming solar radiation back into space, thereby cooling Earth’s surface. In general, thick clouds, such as the cumulonimbus Evidence of Human Causes and Arguments 397 123clouds found in thunderstorms, tend to have a net cooling effect on Earth’s surface, whereas thin clouds, such as high cirrus clouds, have a net warming effect (Grenci and Nese 2006). Higher global temperatures will cause higher rates of evaporation, bringing more of both thick and thin clouds. Clouds thus constitute an important source of uncertainty in future temperature change.

### A2 Negative Feedback – Carbon Sinks

#### Agricultural sequestration can’t solve warming – droughts offset and sequestration is short-term

EPA 2010

[“Frequent Questions”, http://www.epa.gov/sequestration/faq.html#8]

According to a National Academy of Sciences 2001 report, "Greenhouse gases are accumulating in the Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise." In addition to temperature, human-induced climate change may also affect growing seasons, precipitation and the frequency and severity of extreme weather events, such as fire. These changes can influence forests, farming and the health of ecosystems, and thus carbon sequestration. Some argue that rising CO2 levels will enhance sequestration above normal rates due to a fertilization effect. However, the concurrent changes in temperature and precipitation, along with local nutrient availability and harmful air pollutants, complicate this view. Furthermore, recent studies of pine forests fumigated with elevated CO2 levels have shown that this fertilization effect may only be short-lived (Schlesinger and Lichter 2001; Oren et al. 2001). Current projections of business-as-usual U.S. sequestration rates under various climate change scenarios show both increases and decreases in carbon storage depending on various assumptions. To date, few analyses of the potential for additional sequestration over time have considered the future effects of climate change

### A2 Adaptation

### AT: Adaptation

#### Adaptation doesn’t solve.

Reilly 14 John Reilly (co-director of the MIT Joint Program on the Science and Policy of Global Change) “Why We Can’t Just Adapt to Climate Change” MIT Technology Review April 3rd 2014 http://www.technologyreview.com/view/526116/why-we-cant-just-adapt-to-climate-change/

That is where a measure of wealth brings some resilience—I have those options, others do not. The report “quantifies” in some sense by establishing an element of “relative risk,” concluding that the poor and marginalized in society are more vulnerable because they do not have the means to adapt. Beyond this, it is not clear that climate prediction is at a high enough level to offer information that I can use to take concrete actions for most day-to-day decisions and investments. What the report does provide is some documentation of adaptation in action—what different regions, cities, sectors, and groups are doing to adapt—concluding that there is a growing body of experience from which to learn. However, perhaps the greatest truth in the report is in the following statement: “Adaptation is place and context specific, with no single approach for reducing risks appropriate across all settings (high confidence). Effective risk reduction and adaptation strategies consider the dynamics of vulnerability and exposure and their linkages with socioeconomic processes, sustainable development, and climate change.” Hence, while it’s possible to learn from others’ adaptation experiences, in the end, the specifics of climate change in my place, given my circumstances, and the socio-economic environment in which I live will present me with very different climate outcomes and opportunities to adapt than you will have where you live. This fact alone raises the cost of adaptation, because to some degree each recipe needs to be invented anew. What worked in the past likely won’t work in the future—or at least, not as well. And we need to process a lot of highly uncertain climate projections in developing the new recipe. The report also concludes, not surprisingly, that risks increase and extend to more people, places, and things if the global temperature rise is three degrees Celsius or greater than if there is only a one-degree rise. Overall, the report provides, in my judgment, a compelling case for more serious mitigation efforts—the topic of the next IPCC report, to come out later this month.

#### The rate of climate change prevents adaptation

Romm ’07 [Joseph, Senior Fellow at Center for American Progress, Aug 29, “Hurricane Katrina and the Myth of Global Warming Adaptation,” http://gristmill.grist.org/story/2007/8/29/94352/7786]

If we won't adapt to the realities of having one city below sea level in hurricane alley, what are the chances we are going to adapt to the realities of having all our great Gulf and Atlantic Coast cities at risk for the same fate as New Orleans -- since sea level from climate change will ultimately put many cities, like Miami, below sea level? And just how do you adapt to sea levels rising 6 to 12 inches a decade for centuries, which well may be our fate by 2100 if we don't reverse greenhouse-gas emissions trends soon. Climate change driven by human-caused GHGs is already happening much faster than past climate change from natural causes -- and it is accelerating.

#### Even if adaptation was possible – non-linear impacts disrupt the process

Mazo 2010 [Jeffrey Mazo, Managing Editor, Survival and Research Fellow for Environmental Security and Science Policy at the International Institute for Strategic Studies in London, 3-2010, “Climate Conflict: How global warming threatens security and what to do about it,” pg. 29]

This latter aspect, the rate of change, is a critical factor in terms of adapting to climate change. Although some states and societies will be better able to adapt to change than others, regardless of how resilient a given society is there will always be some point at which its efforts would be overwhelmed by the pace of change. Changes in climate - long-term wind and rainfall patterns, daily and seasonal temperature variations, and so on - will produce physical effects such as droughts, floods and increasing severity of typhoons and hurricanes, and ecological effects such as changes in the geographical range of species (including disease-causing organisms, domesticated crops and crop pests). These physical changes in turn may lead to effects such as disruption of water resources, declining crop yields and food stocks, wildfires, severe disease outbreaks, and an increase in numbers of refugees and internally displaced persons.4